

A Taxonomic Study of the Genus *Campylotropis* (Leguminosae) III

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In this third part of the paper, the species from No. 26 to No. 37 are prepared. Four new combinations and two new status are proposed in this part.

Key words: *Campylotropis*, classification, distribution, Leguminosae.

26. *Campylotropis polyantha* (Franch.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 340 (1912), & in Sargent, Pl. Wils. **2**: 114 (1914), & in Hand.-Mazz., Symb. Sin. **7**: 573 (1933); Rehder in J. Arn. Arb. **13**: 329 (1932); E. Peter in Act. Hort. Gothob. **13**: 437 (1940); Fl. Illust. Pl. Prim. Sin. 540, fig. 536 (1955); Icon. Cormophyt. Sin. **2**: 466, fig. 2662 (1972); C.Y. Wu & al., Index Fl. Yunnan. **1**: 575 (1984); P.Y. Fu in Bull. Bot. Res., Harbin **7**(4): 44 (1987), excl. syn. *C. sargentiana* Schindl., *L. sargentiana* (Schindl.) H.Lév. & *C. smithii* Ricker; P.Y. Fu in Fl. Reip. Pop. Sin. **41**: 118 (1995); Nemoto & H. Ohashi in Amer. J. Bot. **83**: 867 (1996); Barham in Curtis's Bot. Mag. **14**: 203, pl. 327 (1997). [Figs. 40B, 42, 43a]

Lespedeza eriocarpa DC. var. *polyantha* Franch., Pl. Delavay. 168 (1890) [Type: China. Yunnan. in silvis ad collum Pi-iou-se, supra Tapin-tze, alt. 2000 m. Delavay 3537 (P holo. n. v., photo in A)].

Lespedeza eriocarpa DC. var. *chinensis* Pamp. in Nuovo Giorn. Bot. Ital., n.s., **17**: 21 (1910) [Type: China. Yunnan-sen, montagnes. Maire 169 (UC iso., n. v., photo in A)].

Lespedeza eriocarpa DC. var. *chinensis* Pamp. subvar. *polyantha* (Franch.) Pamp. in Nuovo Giorn. Bot. Ital., n.s., **17**: 21 (1910).

Lespedeza muehleana Schindl. in Repert. Spec. Nov. Regni. Veg. **9**: 517 (1911) [Type: China. Sichuan. Soulié 2400 & 2401 (B syn., n. v.)], p. p., excl. specim. cit. Wilson 1168.

Lespedeza polyantha (Franch.) Schindl. in Repert. Spec. Nov. Regni. Veg. **9**: 520 (1911); H.Lév., Cat. Ill. Alphab. Pl. Sen Tchouen 103 (1918).

Campylotropis muehleana (Schindl.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 339 (1912), & in Sargent, l. c.: 114 (1914); Fl. Illust. Pl. Prim. Sin. 541, fig. 537 (1955).

Lespedeza blinii H.Lév. in Bull. Bot. Geog. **25**: 48 (1915), p. p. [Type: China. Yunnan. Mong-kou, 900 m. E. E. Maire s.n. (E holo.)], & Cat. Pl. Yun-Nan 157 (1916).

Lespedeza polyantha (Franch.) H.Lév., Cat. Pl. Yun-Nan 158 (1916), nom. illegit.

Campylotropis souliei Schindl. in Bot. Jahrb. **54**: 66 (1916) [Type: China. Sichuan. Yar-gong as Var-gong. Soulié 3969 (P holo.)].

Campylotropis reticulata S.S. Chien in Contrib. Biol. Lab. Sc. Soc. Chin. Bot. **8**: 129 (1932) [Type: Szechuan, Xichang Xian as "Si-chang-hsien", alt. 1860 m., W.P. Fang 9409 (PE holo.)].

Campylotropis reticulata Ricker in J.

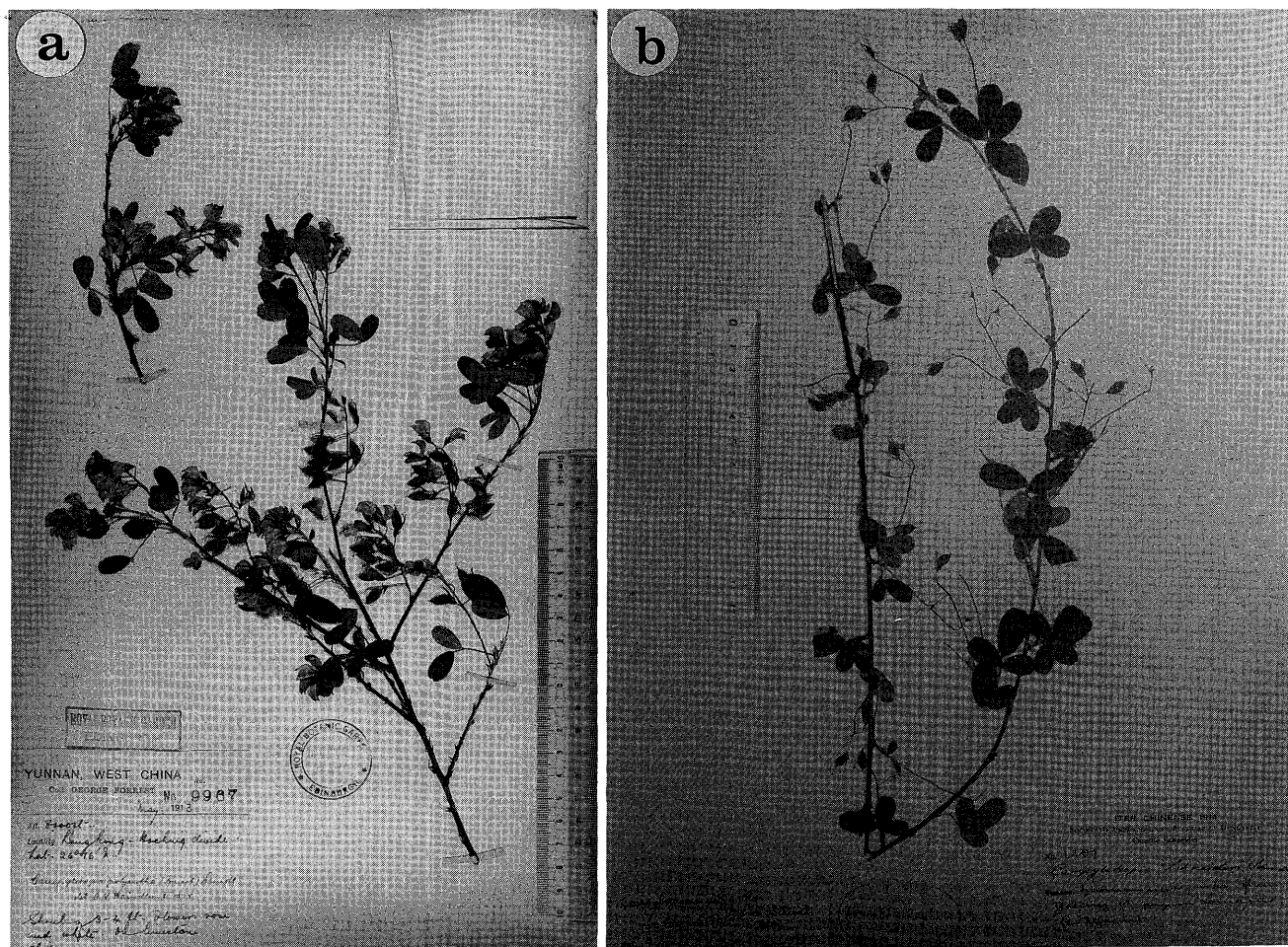


Fig. 42. a: *Campylotropis polyantha* (Franch.) Schindl. var. *polyantha* f. *polyantha* (voucher specimen: Forrest 9967, E). b: *C. polyantha* (Franch.) Schindl. var. *polyantha* f. *leiocarpa* (Pamp.) Iokawa & H. Ohashi (Schneider 1201, A).

Wash. Acad. Sci. **36**: 40 (1946) [Type: China. Yunnan. Meng-tsze. A. Henry 9626A. (US holo.; A, E, MO iso.)], non S.S. Chien (1932).

Campylotropis wangii Ricker in J. Wash. Acad. Sci. **36**: 40 (1946) [Type: China. Yunnan. A-tun-tze. C. W. Wang 70331 (A holo.; KUN iso.)].

Campylotropis macrocarpa auct. non (Bunge) Rehder (1914): C.Y.Wu & al., Index Fl. Yunnan. **1**: 575 (1984).

Campylotropis reticulineris C.Y.Wu in C.Y.Wu & al., Index Fl. Yunnan. **1**: 576 (1984) [Type: type of *C. reticulata* Ricker].

Campylotropis polyantha (Franch.) Schindl. var. *polyantha* f. *macrophylla* P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 46 (1987) [Type: China. Yunnan. Yongzhichun, alt. 2100 m. C. C. Lu 63206 (KUN holo.; PE iso.)], & in Fl. Reip. Pop. Sin. **41**: 120 (1995), **syn. nov.**

Campylotropis polyantha (Franch.) Schindl. var. *polyantha* f. *souliei* (Schindl.) P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 46 (1987), & in Fl. Reip. Pop. Sin. **41**: 120 (1995), **syn. nov.**

Campylotropis polyantha (Franch.) Schindl. var. *tomentosa* P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 46 (1987) [Type: China. Sichuan. Shimianxian, in pratis viaticis alt. 900 m. C. J. Xie 39550 (WUG holo.; PE iso.)], & in Fl. Reip. Pop. Sin. **41**: 121 (1995), **syn. nov.**

Campylotropis tomentosipetiolata P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 47, fig. 6 (1987) [Type: China. Sichuan. Mulixian. ad vias in fruticetis alt. 1830 m. S. G. Wu 2552 (KUN holo.)], & in Fl. Reip. Pop. Sin. **41**: 120 (1995), **syn. nov.**

A shrub, usually 100–200 cm high; young stems with appressed or ascending hairs. Leaves with a distinct rachis; rachis 1–8 mm long. Stipules 1.5–6 mm long, 0.8–1.5 mm wide. Petioles 0.5–4 cm long, appressed or ascending pubescent. Leaflets subcoriaceous, oblong, obovate or ovate to narrowly ovate,

retuse and mucronulate at the apex, obtuse or rounded at the base, upper surface glabrous or sparsely pubescent, lower surface subdensely appressed or ascending pubescent; terminal leaflets 1–4 cm long, 0.5–2.5 cm wide. Stipels present at the top of the petioles, linear, 1–2 mm long, sometimes also present at the top of the rachis. Inflorescences 2–13 cm long; rachis and pedicels appressed or ascending pubescent mixed with glandular hairs. Bracts 1–5 mm long. Pedicels 3–9 mm long. Bracteoles 0.5–2 mm long. Calyx subdensely ascending short hairy mixed with glandular hairs; tube 1.5–2.5 mm long; lobes narrowly triangular, 1.3–2.5 mm long. Corolla purple to pinkish white; standard elliptic, obtuse at the apex, 10–14 mm long (including 0.7–1.2 mm long claw), 5–9 mm wide; wings 10–13 mm long (including 2.2–3 mm long claw), 3–5.8 mm wide; keel-petals 11.3–16.2 mm long (including 2.2–2.7 mm long claw). Androecia 10–12 mm long, vexillary stamen connate to staminal tube for about one-fifth of its length. Gynoecia 10.5–14 mm long; ovary 2.5–4 mm long; style 7.5–9 mm long. Pods obliquely ovate to elliptic or obovate, acute at the apex, 6–11 mm long, 3–5 mm wide. Seeds reniform, palebrown, $2.5\text{--}3.6 \times 1.6\text{--}2$ mm in size.

Distribution. China (Guizhou, Sichuan, Yunnan and Xizang). (Fig. 48a)

Campylotropis polyantha is sometimes confused with *C. macrocarpa* or *C. henryi*, but is easily distinguishable by the presence of stipels. It is widely distributed in southwest China, especially abundant in Yunnan where *C. polyantha* has been erroneously referred to *C. macrocarpa*, and greatly varies in the shape and size of leaflets and the hairiness.

Campylotropis polyantha var. *polyantha* recorded so far from Gansu (Fu 1987) is referable to *C. macrocarpa* var. *hupehensis*. In var. *polyantha*, plants with glabrous pods on the lateral surface are easily recognizable as

a form, f. *leiocarpa*, although it is sometimes found in populations of the typical form and not geographically separated. Var. *neglecta* is separated from var. *polyantha* in distribution area, although only one collection had been examined.

Campylotropis polyantha and *C. macrocarpa* seem to be distributed separately into different areas from Sichuan; the former occurs in southern and western areas from Sichuan (western Guizhou, Xizang and Yunnan), while the latter is distributed in areas from Sichuan to northern and eastern regions in China, Korea and southern Mongolia.

Key to the varieties and the forms of *C. polyantha*

1. Bracts 1–3.5 mm long, caducous before flowering; pedicels 3–8 mm long.....2 (var. *polyantha*)
2. Lateral surface of pods pubescentf. *polyantha*
2. Lateral surface of pods glabrousf. *leiocarpa*
1. Bracts 3–5 mm long, persistent until fruiting; pedicels 7–9 mm long, lateral surface of pods pubescent.....var. *neglecta*

26–1. *Campylotropis polyantha* (Franch.) Schindl. var. ***polyantha* f. *polyantha***

[Figs. 40B, 42a].

Specimens examined: CHINA. **Guizhou.** (E. Bodinier s.n., E-syntype of *Lepedeza dichromoxylon* H.Lév.); Gan-chouen (J. Cavalerie 3997, pro.parte, E-isosyntype of *Lepedeza dichromoxylon* H.Lév.); Anlung, 483 m (Y. Tsiang 7369, A). **Sichuan.** Derong Xian, 3000 m (Dezi 4121, KUN), loc. cit., 3200 m (Dezi 4121, PE); Xichang Xian, 1860 m (W. P. Fang 9409, PE-holotype of *C. reticulata* S.S.Chien); Toka, 2500 m (Handel-Mazzetti 2397, A, K); Kwapi, Yényuen, 2125–2750 m (Handel-Mazzetti 2755, E); locality unknown, 2800 m (C. Schneider 1366, A); Batang Xian, 2650 m (Sichuan Veg. Exped. 3920, PE), Yar-gong (Soulie 3969, P-holotype of *C. souliei* Schindl.); Batang Xian, 2450 m (Qinghai-Xizang Exped. 5196, KUN); Yanyuan Xian, 1200–1300 m (Qinghai-Xizang Exped. 12018, KUN-paratype of *C.*

tomentosipetiolata P.Y.Fu); Muli, 1830 m (S. K. Wu 2552, KUN-holotype of *C. tomentosipetiolata* P.Y.Fu, PE-isotype); Shimian Xian, 900 m (C. J. Xie 39550, PE-isotype of *C. polyantha* var. *tomentosa* P.Y.Fu). **Xizang** (Tibet). Tse-kou (Monbeig s. n., E, K); locality unknown (Soulié 1573, P); Markam Xian, Zhubalong, 2600 m (Qinghai-Xizang Exped. 11662, KUN). **Yunnan.** E Lijiang, Tai-ngo-koo (R. C. Ching 21624, A); W Lijiang, Laschiba (R. C. Ching 21843, A); locality unknown (K. M. Feng 3377, A); Mekong-Yangtze divide, 8000–11000 ft. (G. Forrest 153, E); Eastern flank of the Dali Range, 9000–10000 ft. (G. Forrest 4237, A, E; 4248, A, E), loc. cit., 8000–9000 ft. (G. Forrest 7244, E); Eastern flank of the Lijiang Range, 9000 ft. (G. Forrest 6679, E); Langkong-Hoching divide, 8000 ft. (G. Forrest 9967, E); Yungbei, 2700 m (Handel-Mazzetti 3243, E); Mekong, 1900–2000 m (Handel-Mazzetti 8469, E); Mengzi, 5000 ft. (A. Henry 9626A, US-holotype of *C. reticulata* Ricker, A, E-isotype); Yungbei, Yungning (F. Kingdon-Ward 5051, E); Deqen Xian, Yongzhichun, 2100 m (C. C. Lu 63206, KUN-holotype of *C. polyantha* f. *macrophylla* P.Y.Fu, PE-isotype); locality unknown (Maire 169, photo in A-type of *Lepedeza eriocarpa* DC. var. *chinensis* Pamp.); Lougai-cuau, 2600 m (E. E. Maire 427, A); Mong-kou, 900 m (E. E. Maire 632, pro.parte, E-isotype of *Lepedeza blinii* H.Lév.; E. E. Maire s.n., pro.parte, E-holotype of *Lepedeza blinii* H.Lév.); Mt. Loshieh (McLaren's collectors 28A, A, E); Mt. Leangwang (McLaren's collectors 94A, A, E); Munghua, Mt. Lungyu (McLaren's collectors L119, E); Yaochou (McLaren's collectors F225, E); Weixi Xian, 1500 m (Qinghai-Xizang Exped. 6204, KUN); Deqen Xian, 2800 m (Qinghai-Xizang Exped. 11164, KUN); Maokai to Tatsang, 5000–5500 ft. (J. F. Rock 3084, E); Dali to Lijiang (J. F. Rock 3191, A; J. F. Rock 3224, A, E); Eastern flank of the Lijiang Range (J. F. Rock 3631, E); Yungning, Mt. Wuaha, 10000 ft. (J. F. Rock 24203, A, E); Sehilungpa (C. Schneider 172, A); locality unknown, 2800 m (C. Schneider 1366, E); Yangbi Xian, 1450 m (Sino-Amer. Bot. Exped. 53, A, E); Chuxiong Xian, 1800 m (Sino-Amer. Bot. Exped. 1278, A, E); Lunan Xian, Daduishi, 1650–1700 m (Sino-Amer. Bot. Exped. 1645, E); Hua-Hong-Dong, near Kunming, 2000 m (Sino-Brit. Exped. K034, E); Chao-tung Xian, 1800 m (H. T. Tsai 50865, A); Weixi Xian, 2300 m (H. T. Tsai 63014, A); Tung-lung-tang, Cheng-kiang, 1800–2000 m (Y. Tsiang & H. Wang 16182, A); Kunming (C. W. Wang 62643, A); Dali Xian, 1300 m (C. W. Wang 63456, A); Deqen Xian, Huann-fu-ping, 3000 m (C. W. Wang 69304, A); Deqen Xian, A-tun-tze, 2700 m (C. W. Wang 70331, A-holotype of *C. wangi* Ricker, KUN-isotype); Lijiang Xian, 2800 m

(C. W. Wang 71400, A); Yanshan Xian, Lung-tang-tsai shan, 1300 m (C. W. Wang 83763, KUN, PE-paratype of *C. polyantha* var. *tomentosa* P.Y.Fu); Kunming, Qiongzhu Si, 1900 m (M. Q. Yin 2112, A); locality unknown (T. T. Yü 5169, 5266, 5865, 6097, 12891, A); Deqen Xian, Shitonpu, 2000 m (T. T. Yü 10395, PE); Deqen Xian, 2600 m (T. T. Yü 10453, KUN-paratype of *C. polyantha* f. *macrophylla* P.Y.Fu); Lijiang Snow Range, 2700 m (T. T. Yü 15084, A, E); Yuragan, Salween valley, 1700 m (T. T. Yü 23062, KUN, PE).

Cultivated in Japan. The Experimental Garden of the Biological Institute, Graduate School of Science, Tohoku University, originated from China, Yunnan, collected by J. Murata (Y. Iokawa 5284, TUS).

Distribution. China (Guizhou, Sichuan, Yunnan and Xizang). (Fig. 48a)

26-2. *Campylotropis polyantha* (Franch.) Schindl. var. ***polyantha*** f. ***leiocarpa*** (Pamp.) Iokawa & H. Ohashi, **stat. nov.** [Fig. 42b]

Lespedeza eriocarpa DC. var. *chinensis* Pamp. subvar. *polyantha* (Franch.) Pamp. f. *leiocarpa* Pamp. in Nuovo Giorn. Bot. Ital., n.s., 17: 22 (1910) [Type: China. Yunnan. montagues. Maire 177 (UC syn., n. v., photo in A), côteaux. Maire 143 (UC syn., n. v., photo in A), Tchong-chang, côteaux. Ducloux 381 (syn., n. v.)].

Lespedeza dichromoxylon H.Lév., Fl. Kouy-Theou 236 (1914) [Type: China. Guizhou. Gan-chouen. J. Cavalerie 3997 (E syn.); Hin-y-hien. E. Bodinier 2279 (E syn.)].

Lespedeza blinii H.Lév. in Bull. Bot. Geog. 25: 48 (1915), p. p. [Type: China. Yunnan. Mong-kou, 900 m. E. E. Maire s.n. (E holo.)], & Cat. Pl. Yun-Nan 157 (1916).

Campylotropis schneideri Schindl. in Repert. Spec. Nov. Regni. Veg. 21: 20 (1925) [Type: China. Sichuan. Yalung, Lomanpu, 1800 m. C. Schneider 1201 (B holo., n. v.; A iso.)].

Campylotropis polyantha (Franch.) Schindl. var. *leiocarpa* (Pamp.) E. Peter in Act. Hort. Gothob. 13: 437 (1940); Lauener in Not. Roy. Bot. Gard. Edinb. 30: 241 (1970); C.Y. Wu & al., Index Fl. Yunnan. 1:

576 (1984); P.Y. Fu in Bull. Bot. Res., Harbin 7(4): 47 (1987), & in Fl. Reip. Pop. Sin. 41: 121 (1995).

Specimens examined: CHINA. **Guizhou.** Hin-y-hien (E. Bodinier 2279, E-syntype of *Lespedeza dichromoxylon* H.Lév.); Gan-chouen (J. Cavalerie 3997, E-syntype of *Lespedeza dichromoxylon* H.Lév.). **Sichuan.** Huili, 1900 m (Handel-Mazzetti 859, E); Yalung, Lomanpu (C. Schneider 1201, A-isotype of *C. schneideri* Schindl.); Kian-ning Xian, 1850 m (T. T. Yü 1753, A). **Xizang** (Tibet). Bowo Xian, 2500 m (Qinghai-Xizang Exped. 73-1382, KUN). **Yunnan.** E. Lijiang, Tai-ngo-koo (R. C. Ching 22134, A); Southwest end of Yangtze valley, 6000 ft. (G. Forrest 5014, E); locality unknown (Maire 143, photo in A-syntype of *Lespedeza eriocarpa* f. *leiocarpa* Pamp.; Maire 177, photo in A-syntype of *Lespedeza eriocarpa* f. *leiocarpa* Pamp.); Mong-kou, 900 m (E. E. Maire s.n., pro parte, E-holotype of *Lespedeza blinii* H.Lév.; E. E. Maire 632, pro parte, E-isotype of *Lespedeza blinii* H.Lév.); Dali, Mt. Malong (McLaren's collectors C12, A, E); Dali to Lijiang, Tsinwei (J. F. Rock 3226, A); Kunming, Hua-Hong-Dong, 2000 m (Sino-British Exped. K034, A); Chan Yi Chou (O. Schoch 369, A); Fen-tai-szu, Cheng-kiang, 1790 m (Y. Tsiang & H. Wang 16180, A); locality unknown (T. T. Yü 5272, 14128, A).

Distribution. China (Guizhou, Sichuan, Yunnan and Xizang).

26-3. *Campylotropis polyantha* (Franch.) Schindl. var. ***neglecta*** (Schindl.) Iokawa & H. Ohashi, **comb. nov.** [Fig. 43a]

Campylotropis neglecta Schindl. in Repert. Spec. Nov. Regni. Veg. 11: 340 (1912) [Type: China. Yunnan. A. Henry 9626 (A holo.; CAL, LE iso.)]; C.Y. Wu & al. Index Fl. Yunnan. 1: 575 (1984); P.Y. Fu in Bull. Bot. Res., Harbin 7(4): 39 (1987), & in Fl. Reip. Pop. Sin. 41: 112 (1995).

Lespedeza neglecta (Schindl.) H.Lév., Cat. Pl. Yun-Nan 158 (1916).

Specimens examined: CHINA. **Yunnan.** Mengtzi, 4600 ft. (A. Henry 9626, A-holotype of *C. neglecta* Schindl., CAL, LE-isotype).

Distribution. China (Yunnan). (Fig. 48a)

27. *Campylotropis sargentiana* Schindl. in Repert. Spec. Nov. Regni. Veg. 11: 341 (1912) [Type: China. Sichuan. Wilson 3492

(A holo.); E. Peter in Act. Hort. Gothob. 13: 438 (1940). [Figs. 43b, 44A]

Lespedeza sargentiana (Schindl.) H. Lév., Cat. Ill. Alphab. Pl. Sen Tchouen 103 (1918).

A shrub, usually 100–200 cm high; young stems with appressed hairs. Leaves with a rachis; rachis 0.5–4.5 mm long. Stipules 2–5 mm long, 0.8–1 mm wide. Petioles 0.7–2.4 cm long, with dense appressed short hairs. Leaflets subcoriaceous, oblong to elliptic, retuse and mucronulate at the apex, obtuse or rounded at the base, upper surface glabrous or sparsely pubescent, lower surface with sericeous hairs; terminal leaflets 1.2–3 cm long, 0.6–1.5 cm wide. Stipels sometimes present, linear, 0.5–1 mm long. Inflorescences 2–11 cm long, sometimes paniculate; rachis densely appressed or ascending short hairy. Bracts 1.2–2 mm long, caducous before anthesis. Pedicels 4–6 mm long, densely appressed or ascending short hairy. Bracteoles 0.5–1.5 mm long. Calyx densely appressed short hairy; tube 1.8–2 mm long; lobes narrowly triangular, 2–2.2 mm long. Corolla purple; standard obovate, obtuse at the apex, 10–11 mm long (including ca. 1 mm long claw), 5–6.5 mm wide; wings 9.5–10.5 mm long (including ca. 2.8 mm long claw), 3.2–4 mm wide; keel-petals shallowly inflexed, 12–16 mm long (including ca. 2.6 mm long claw). Androecia ca. 9.6 mm long, vexillary stamen connate to staminal tube for about one-fifth of its length. Gynoecia ca. 11 mm long; ovary narrowly ovate, short hairy, ca. 2.5 mm long; style ca. 7.5 mm long. Pods obliquely elliptic, acute at the apex, ascending short hairy, ca. 7 mm long, 4–5 mm wide. Seeds reniform, ca. 2.7×2 mm in size.

Specimens examined: CHINA. Sichuan. Kangding Xian, NE. Tachienlu (W. C. Cheng 1935, A, E); Mow Xian, Mowchow (W. P. Fang 1514, A); Kangding Xian, 8500–9000 ft. on rock (W. P. Fang 3504, E, K); Pingwu Xian, Lungan fu (W. P. Fang 4193, A); Kuan Xian (Y. S. Liu 1880, A); O-pien Xian, 1100–1300 m (Y. S. Liu 2276, A); Kangding Xian, Tatsienlu (McLaren AD83, E, KYO); Kangding Xian, Wasigou,

1600 m (T. Naito & al. 420, TUS); Dragochi, 3200 m (H. Smith 4529, A); Romi-chango, 9000–15500 ft. (H. Stevens 214, A); Route to Li-fan Xian, 2700 m (F. T. Wang 21625, A); Western Sichuan (E. H. Wilson 2926, A); Romi-chango, 6000–8000 ft. (E. H. Wilson 3492, A—holotype); O-pien Xian, 1500 m (T. T. Yü 773, A).

Distribution. China (Sichuan). (Fig. 48b)

This species somewhat resembles *Campylotropis macrocarpa* and *C. polyantha* in external features. The absence of glandular hairs in the inflorescences is a good character to distinguish this species from them.

28. *Campylotropis speciosa* (Royle ex Schindl.) Schindl. in Repert. Spec. Nov. Regni. Veg. 11: 425 (1912), ut *C. speciosa* (Royle) Schindl., & in Repert. Spec. Nov. Regni. Veg. Beih. 49: 261 (1928); H. Ohashi in J. Jpn. Bot. 49: 330 (1974), p. p., excl. syn. cit. *C. eriocarpa* Schindl., *C. macrostyla* var. *eriocarpa* (Maxim.) H. Ohashi, *Lespedeza dubia* Schindl. & *C. falconeri* (Prain) Schindl.; H. Ohashi in H. Hara & Williams, Enum. Fl. Pl. Nep. 2: 110 (1979), p. p.; Pramanik & Thothathri in Taxon 33: 318 (1984); Grierson & Long, Fl. Bhutan 1(3): 681 (1987). [Figs. 44B, 45]

[*Oxyramphis virgata* Grah. in Wall., Cat. no. 5350 (1831), nom. nud.]

[*Desmodium angulatum* Wall., Cat. no. 5729 G2, M, O (1831), nom. nud.]

Oxyramphis macrostyla auct. non Wall. (1831): Lindl. in Bot. Reg. 32: t. 28 (1846), p. p., excl. syn. cit.

Lespedeza speciosa Royle [in Maxim. in Act. Hort. Petrop. 2: 350 (1873), pro syn.] ex Schindl. in Repert. Spec. Nov. Regni. Veg. 9: 519 (1911), ut *L. speciosa* Royle apud Maxim. [Type: N.W. India. Hb. Royle s.n. (K holo.; CAL iso.)].

Lespedeza eriocarpa auct. non DC. (1825): Maxim. in Act. Hort. Petrop. 2: 350 (1873), p. p., excl. specim. cit. Griffith; Baker in Hook. f., Fl. Brit. Ind. 2: 144 (1876), p. p., quoad syn. cit. *Oxyramphis virgata*

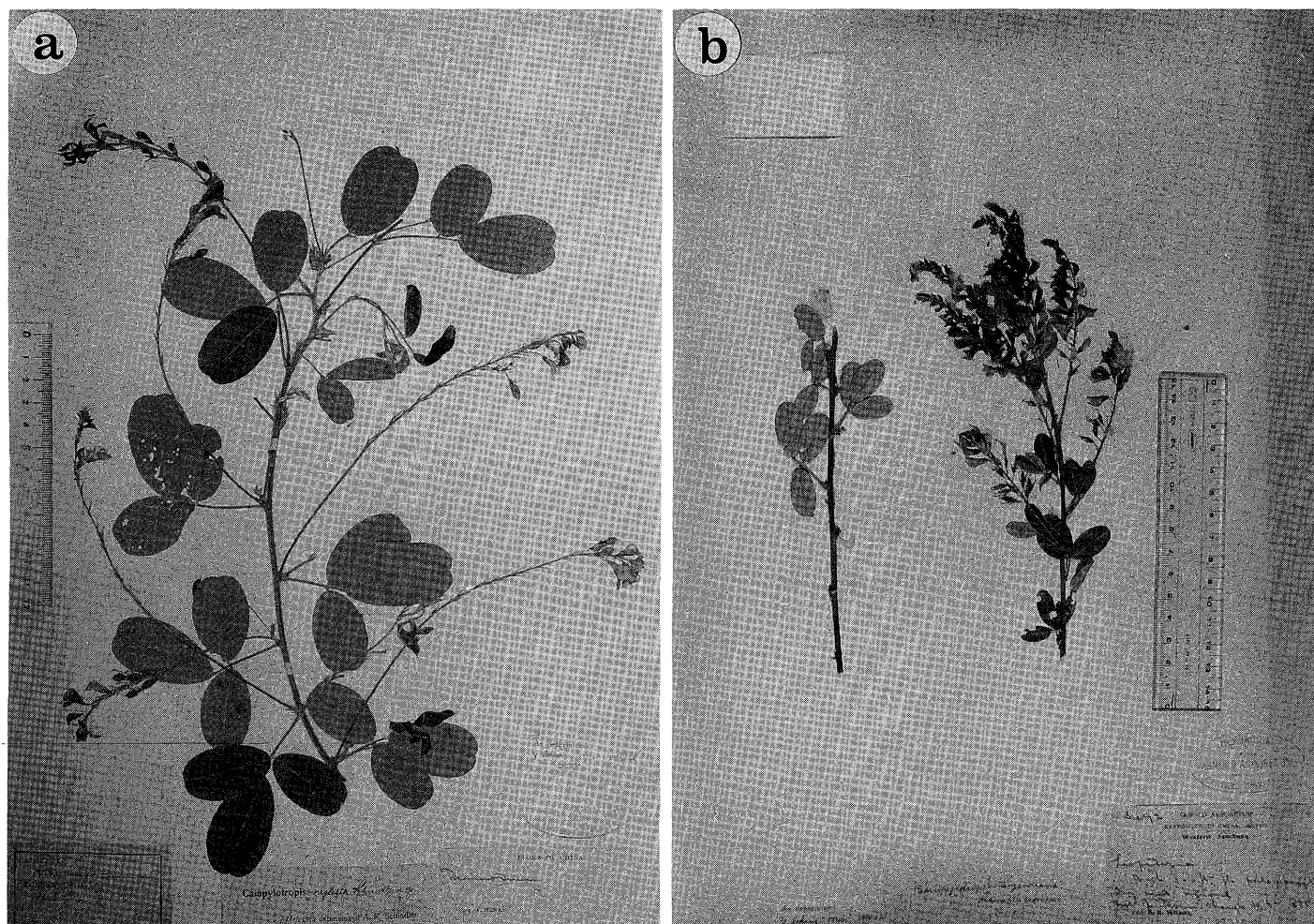


Fig. 43. a: *Campylotropis polyantha* (Franch.) Schindl. var. *neglecta* (Schindl.) Iokawa & H. Ohashi (voucher specimen: Henry 9626, A). b: *C. sargentiana* Schindl. (Wilson 3492, A).

Wall., *Oxyramphis macrostyla* Lindl. & *Desmodium angulatum* Wall., cet. excl.

Lespedeza indica Schindl. in Repert. Spec. Nov. Regni. Veg. 9: 515 (1911) [Type: India. Jaunsar Bahar, Deoban Range, 1800–2100 m. Duthie 1083 (LE holo.), n. v.], non Spreng. (1826).

A shrub, usually ca. 100 cm high; young stems with subdense appressed short hairs. Leaves with a distinct rachis; rachis 1–12 mm long. Stipules 3–7 mm long, 1–1.5 mm wide. Petioles 0.5–4.5 cm long, with subdense appressed short hairs. Leaflets subcoriaceous, obovate to oblong, retuse and mucronulate at the apex, obtuse or cuneate at the base, upper surface glabrous or sparsely short hairy, lower surface with dense sericeous hairs; terminal leaflets 1.2–4.8 cm long, 0.8–2.8 cm wide. Stipels absent. Inflorescences 2.5–20 cm long; rachis and pedicels densely appressed or ascending short hairy. Bracts 2–4 mm long, caducous before anthesis but sometimes persistent. Pedicels 1–7 mm long. Bracteoles 1.2–2 mm long. Calyx subdensely appressed short hairy; tube 1.5–2.5 mm long; lobes narrowly triangular, 2–3.5 mm long. Corolla purple; standard obovate, obtuse at the apex, 10.5–12 mm long (including ca. 1.2 mm long claw), 4.6–6 mm wide; wings 9.8–11.5 mm long (including ca. 3 mm long claw), 3–4 mm wide; keel-petals 12–15 mm long (including ca. 3 mm long claw). Androecia 9.7–10.4 mm long, vexillary stamen connate to staminal tube for about one-fifth of its length. Gynoecia ca. 11.5 mm long; ovary narrowly ovate, short hairy, ca. 2.5 mm long; style ca. 8.3 mm long. Pods obliquely obovate, ascending short hairy, 6.5–7.5 mm long, 3.3–4.5 mm wide. Seeds reniform, dark brown, 3–3.5 × 1.5–2 mm in size.

Distribution. Bhutan, China (Xizang), India (Assam, Uttar Pradesh and Himachal Pradesh) and Nepal. (Fig. 48c)

Campylotropis speciosa lacks glandular hairs on the calyx, pedicel and main

inflorescence axis, and by this character is clearly distinguishable from *C. falconeri* which had often been regarded to be identical with the former.

Campylotropis eriocarpa Schindl. is very similar to *C. speciosa*, but they are recognized as different in the pedicels in relation to their different distribution patterns.

Lespedeza eriocarpa DC. is different from *C. eriocarpa* Schindl. and is a synonym of *C. macrostyla*.

Key to the subspecies of *C. speciosa*

1. Pedicels thick, 1–3 mm long
.....subsp. *speciosa*
1. Pedicels slender, 3–7 mm long.....
.....subsp. *eriocarpa*

28–1. *Campylotropis speciosa* (Royle ex Schindl.) Schindl. subsp. ***speciosa***

[Figs. 44B, 45a]

Specimens examined: INDIA. Mussoorie (A. Anderson s.n., E); Bashahr State, Taranda–Sarahan, 7500 ft. (J. H. Lace 1040, E); Shimla, 7000 ft. (E; MacLagan 568, E; Madden s.n., E); Jaunsar, 6000 ft. (K. Nand 508, E); Chamba, Dalhousie Range, 7000 ft. (R. Parker s.n., A), Kajiara to Chamba, 5000 ft. (R. Parker s.n., A); Kharamba, 8500 ft. (M. B. Raizada 7257, E); Chakrali, 7000 ft. (M. B. Raizada 7414, E); NW. India (Hb. Royle s.n., K–holotype of *Lespedeza speciosa* Royle ex Schindl., CAL, E–isotype; J. L. Stewart s.n., E); Mussoorie, 6500 ft. (R. R. Stewart 15776, A); Kumaon (Wall. Cat. 5350, E); Chamba, Dalhousie (Wall. Cat. 5729, E); Eangsi to Dali, 7300 ft. (G. Watt 8659, E); Rampur to Assu, 4000 ft. (G. Watt 13646, E); Shimla, 7000 m (G. Watt 13672, E).

NEPAL. Dunche–Singum Gompa, 2000–3200 m (H. Kanai & al. 727263, TI); Langtang–Syarpagoan–Khangjung, 8000–9500 ft. (O. Polunin & al. 1817, BM, TI); Mangri, Mugu Karnali Valley, 8000 ft. (O. Polunin & al. 3039, BM, TI); Rohagaon, Suli Gad, 10000 ft. (O. Polunin & al. 3429, BM, E, TI); Phulchoki, 9500 ft. (Ram Bdr. & Radha Krishna 17894, TI); Phulchoke, S of Kathmandu, 6750 ft. (A. D. Schilling 1092, E, TI); Langdeng, 10000 ft. (K. N. Sharnag 127, E); Dhanbang, 6000 ft. (Stainton & al. 1311, BM, TI); Gurjakhani, 8500 ft. (Stainton & al. 4357, BM, TI).

Himalayas. (Wall. Cat. 5729, E; Hb. Royle s.n., GH, same sheet as Falconer 443 = *C. falconeri*; I. B. Mill

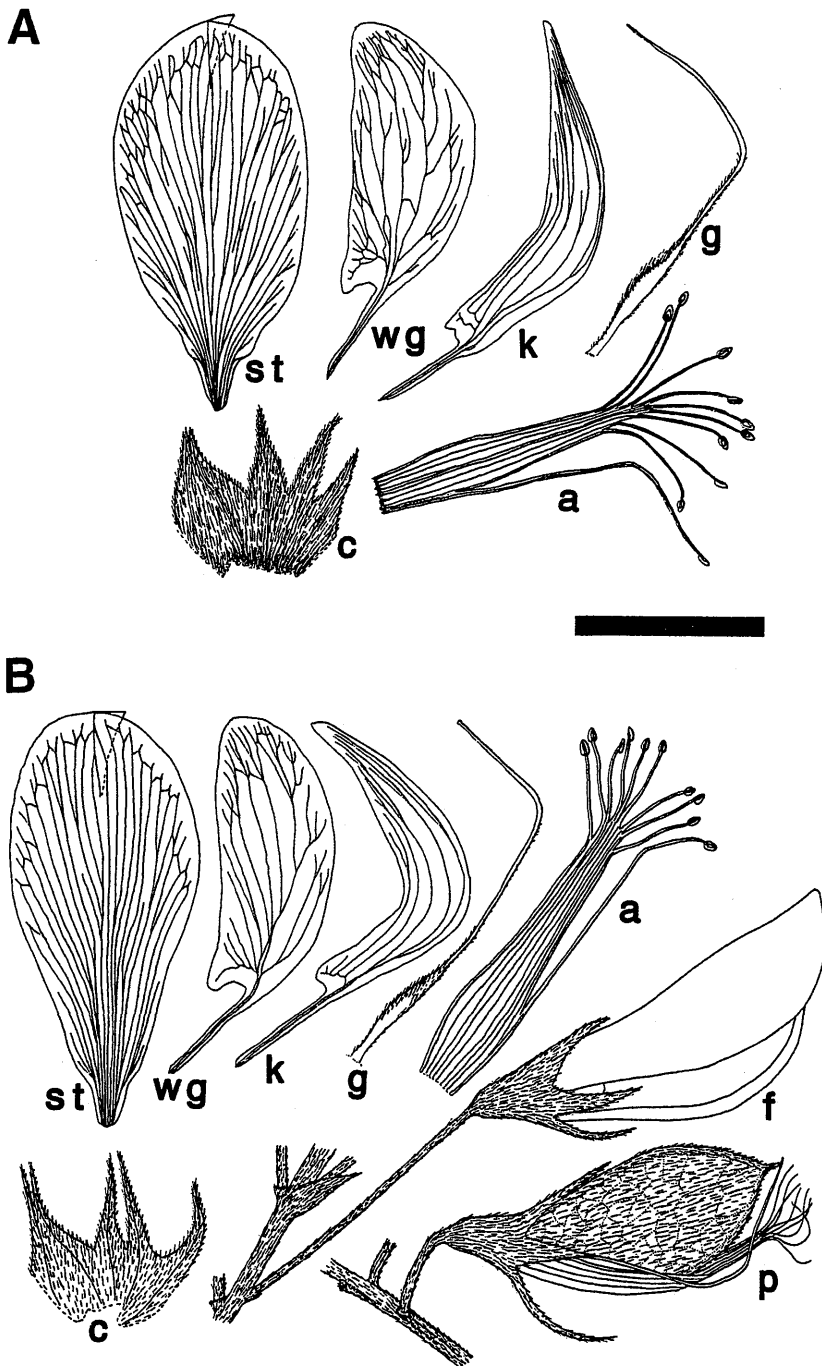


Fig. 44. Flowers of *Campylotropis sargentiana* (A. voucher specimen: Wilson 3492, A) and flower and pod of *C. speciosa* (B. p: subsp. *speciosa*, Parker 29–11–1919, A; others: subsp. *eriocarpa*, Makherjee 5892, TUS). a: androecium, c: calyx opened (outer surface), upper lobe in left, f: flower with pedicel, g: gynoeceum, k: keel-petal, p: pod with pedicel, st: standard, wg: wing. Scale bar = 5 mm.

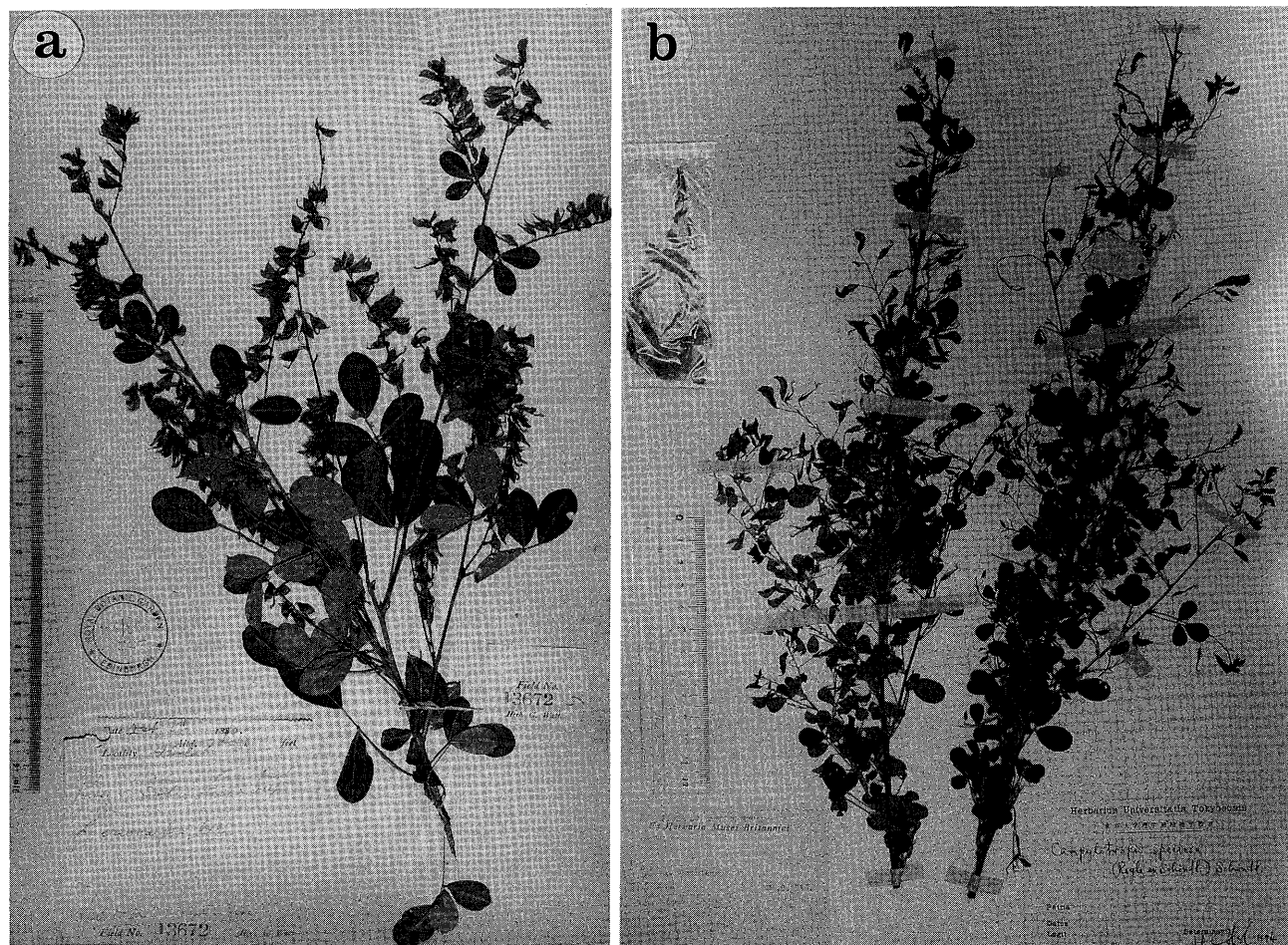


Fig. 45. a: *Campylotropis speciosa* (Royle ex Schindl.) Schindl. subsp. *speciosa* (voucher specimen: Watt 13672, E). b: *C. speciosa* (Royle ex Schindl.) Schindl. subsp. *eriocarpa* (Schindl.) Iokawa & H. Ohashi (Stainton 1750, TI).

s.n., GH, same sheet as Falconer 443 = *C. falconeri*).

Distribution. Western and central Nepal and India (Uttar Pradesh and Himachal Pradesh). (Fig. 48c)

28–2. *Campylotropis speciosa* (Royle ex Schindl.) Schindl. subsp. **eriocarpa** (Schindl.) Iokawa & H. Ohashi, **comb. nov.**

[Figs. 44B, 45b]

Campylotropis eriocarpa Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 347 (1912), ut *C. eriocarpa* (Maxim.) Schindl. [Type: Bengal Orientali. Griffith s.n. Kew Distrib. no. 1746 (K holo.), n. v.], & in Repert. Spec. Nov. Regni. Veg. Beih. **49**: 260 (1928); Ali in Stewart, Annot. Cat. Vasc. Pl. W. Pakistan Kashmir 398 (1972), ut *C. eriocarpa* (DC.) Schindl.; Thothathri in Materials Fl. Bhutan 68 (1973), ut *C. eriocarpa* (Royle ex Maxim.) Schindl.; Pramanik & Thothathri in Taxon **33**: 318 (1984).

Campylotropis macrostyla (D. Don) Schindl. var. *eriocarpa* (Maxim.) H. Ohashi in Fl. E. Himal. 142 (1966).

Lespedeza eriocarpa auct. non DC. (1825): Maxim. in Act. Hort. Petrop. **2**: 350 (1973), p. p., quoad specim. cit. Griffith, cet. excl.; Baker in Hook.f., Fl. Brit. Ind. **2**: 144 (1876), p. p., quoad syn. cit. Royle, cet. excl.

Campylotropis speciosa auct. non (Royle ex Schindl.) Schindl.: H. Ohashi in J. Jpn. Bot. **49**: 329 (1974), p. p., quoad syn. cit. *C. eriocarpa* Schindl. & *C. macrostyla* var. *eriocarpa* (Maxim.) H. Ohashi, cet. excl.

Specimens examined: BHUTAN. Tashiking, Tongsa, 8000 ft. (R. E. Cooper 2053, E); Trashiyangksi, Rocha Chu valley, 8000 ft. (F. Lindlow & G. Lueriff 984, E); Thimphu, Paro (C. Sargent 249, E); Thimphu, below Yosepang, W. side of Dochong, 2495 m (I. W. J. Sinclair & D. G. Long 4791, E); Punakha, below Khelekha, Tang Chu, 1940 m (I. W. J. Sinclair & D. G. Long 5650, E).

CHINA. Xizang (Tibet). Cona Xian, 2600 m (Qinghai-Xizang Exped. 74-2785, 75-176, KUN), loc. cit., 2750 m (Qinghai-Xizang Exped. 751704, KUN).

INDIA. Khasia, 5000–6000 ft. (Hook. f. & Thomson s.n., E); Flora of Bengal and Borders (S. K. Mukherjee

5892, TUS); Assam (Simons s.n., E).

NEPAL.: Charikot, 6700 ft. (Bauerji & al. 2741, TI); Helok-Baroya Khimty (H. Kanai & al. 6301466, TI); Bonshin-Ngyak (T. Namba 1004023-2, TI); Tamur Valley, Thapabu Khola, N. of Taplejung, 7500 ft. (J. D. A. Stainton 1220, BM, TI); Arun Valley, Chyamtang, 7000 ft. (J. D. A. Stainton 1750, BM, TI); Jaljale Himal, Setidunga–Mangshing Kharka, 2600 m (Y. Tateishi 7736, TUS); Kodari, near Tibetan border (M. Togashi & H. Idzumi s.n., Oct. 4, 1978, TUS).

Distribution. Bhutan, China (Xizang), India (Assam), eastern Nepal. (Fig. 48c)

29. *Campylotropis stenocarpa* (Klotzsch) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 345 (1912); in Repert. Spec. Nov. Regni. Veg. Beih. **49**: 261 (1928); Ali in Biologia **12**: 44 (1966). [Figs. 46a, 47A]

[*Oxyramphis donii* Wall., Cat. no. 5348, 5349 (1831), nom. nud., p. p.].

[*Oxyramphis sericea* Grah. in Wall., Cat. no. 5349 (1831), nom. nud., p. p.].

Oxyramphis stenocarpa Klotzsch in Bot. Ergeb. Waldem. Reise 158 (1862) [Type: Himalayas. Hoffmeister s. n. (B holo), n. v.].

Lespedeza stenocarpa (Klotzsch) Maxim. in Act. Hort. Petrop. **2**: 349 (1873), p. p., excl. syn. & specim. cit. Royle, p. p.; Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. **66**: 376 (1897).

Campylotropis macrostyla (D. Don) Lindl. ex Miq. var. *stenocarpa* (Klotzsch) H. Ohashi in J. Jpn. Bot. **49**: 329 (1974); in H. Hara & Williams, Enum. Fl. Pl. Nep. **2**: 109 (1979).

A shrub, usually 100–200 cm high; young stems densely whitish pubescent. Leaves with a short rachis; rachis ca. 3 mm long. Stipules 4–6 mm long, 1–1.5 mm wide. Petioles 0.2–1.5 cm long, densely whitish ascending pubescent. Leaflets subcoriaceous, obovate to obdeltoid, retuse and mucronulate at the apex, cuneate at the base, lateral nerves prominent, almost straight and parallel, upper surface glabrous or sparsely pubescent, lower surface with dense sericeous hairs; terminal leaflets 1.1–2.5 cm long, 0.8–1.8 cm wide. Stipels absent. Inflorescences

1.5–4 cm long, sometimes paniculate; rachis densely whitish pubescent. Bracts 2–3 mm long. Pedicels 2–6 mm long, densely whitish pubescent. Bracteoles 2–4 mm long. Calyx densely whitish ascending pubescent; tube 1.5–2.5 mm long; lobes narrowly triangular, 2.6–4 mm long. Corolla purple; standard obovate, obtuse at the apex, 11.5–13 mm long (including ca. 1.2 mm long claw), 6.2–7 mm wide; wings 12–13.5 mm long (including 2.7–3 mm long claw), ca. 4 mm wide; keel-petals 15–16.5 mm long (including ca. 3 mm long claw). Androecia 12–13 mm long, vexillary stamen connate to staminal tube for about one-third of its length. Gynoecia ca. 13 mm long; ovary narrowly ovate, short hairy, ca. 3 mm long; style 9–9.5 mm long. Pods obliquely oblong, acute with hardened hook-like style at the apex, whitish pubescent, 12–14 mm long, 3.5–4 mm wide.

Specimens examined: INDIA. Mussoorie, 5000 ft. (A. Anderson s.n., E), Wunberg (R. L. Fleming 392, A); Kumaon, Mola Pani, 4600 ft. (N. Gill 350, TI); Shimla, 6000–7300 ft. (Herb. Hooker s.n., Mar. 29–Apr. 10, 1856, A); Bashahr, Rampur (J. H. Lace 851, E); Kahlur (J. H. Lace s.n., E); Shimla (J. H. Lace s.n., E); Madden 140, E; V. Mittre & P. K. K. Nair s.n., TI); NW. India (J. L. Stewart s.n., E); Ramghar (W. Watson s.n., E); Shimla (G. Watt 4206, 4250, E).

NEPAL. Pulanto, 7000 ft. (O. Polunin & al. 809, BM, E, TI); Between Narku and Ila, Bheri River, 6500 ft. (O. Polunin & al. 3212, BM, TI); Karnali valley, S. of Raskot, 5500 ft. (J. D. A. Stainton 6157, BM, TI).

Himalayas. Saharaupus, 2400 ft. (J. S. Gamble 22509, K).

Distribution. Western Nepal, India (Uttar Pradesh and Himachal Pradesh) and Pakistan (Kashmir). (Fig. 48d)

As mentioned in the note of *Campylotropis macrostyla*, *C. stenocarpa* is similar to it in the vegetative morphology, but the inflorescences and pods are distinctly different between both species.

30. *Campylotropis sulcata* Schindl. in Bot. Jahrb. **54**: 65 (1916) [Type: China. Yunnan. Bons d'Anty s.n. (P holo.)]; C.Y.Wu & al. Index Fl. Yunnan. **1**: 576 (1984); P.Y.Fu in

Bull. Bot. Res., Harbin **7**(4): 51 (1987), & in Fl. Reip. Pop. Sin. **41**: 126 (1995).

[Figs. 46b, 47B]

Campylotropis rockii Schindl. in Repert. Spec. Nov. Regni. Veg. **22**: 270 (1926) [Type: China. Yunnan. Simao, Ganlanba as west of Mekong, Salween water divide, upper Kan-lan-chai. J. F. Rock 7059 (US iso., photo in TUS); C.Y.Wu & al. Index Fl. Yunnan. **1**: 576 (1984); P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 29 (1987), & in Fl. Reip. Pop. Sin. **41**: 100 (1995), **syn. nov.**

Campylotropis purpurascens Ricker in J. Wash. Acad. Sci. **36**: 39 (1946) [Type: China. Yunnan. Hila. Shunning. T. T. Yü 17571 (A holo.; E, KUN iso.)].

A shrub, usually 100–300 cm high; young stems multiangular, often sulcate, with dense appressed tawny hairs. Leaves with a distinct rachis; rachis 1–8 mm long. Stipules 3–8 mm long, 0.8–1.3 mm wide. Petioles 0.5–2.5 cm long, densely ascending pubescent. Leaflets coriaceous, elliptic to oblong, retuse and mucronulate at the apex, obtuse or rounded at the base, upper surface densely puberulous, lower surface with dense tawny sericeous hairs; terminal leaflets 2.7–6.5 cm long, 1.2–2.8 cm wide. Stipels absent or rarely present. Inflorescences 4–9 cm long, sometimes paniculate; rachis densely ascending pubescent mixed with glandular hairs. Bracts 3–5 mm long, caducous before anthesis but sometimes persistent. Pedicels 2–4 mm long, densely ascending pubescent mixed with glandular hairs. Bracteoles 0.8–2 mm long. Calyx densely ascending pubescent; tube 1.5–2 mm long; lobes narrowly triangular, 1.5–1.6 mm long. Corolla purple to rose; standard obovate, obtuse at the apex, 9–10 mm long (including ca. 1 mm long claw), ca. 5.5 mm wide; wings 8.5–9 mm long (including ca. 1.8 mm long claw), ca. 3 mm wide; keel-petals 11–12 mm long (including ca. 1.8 mm long claw). Androecia 8.5–9 mm long, vexillary stamen connate to staminal tube for about one-fourth of its

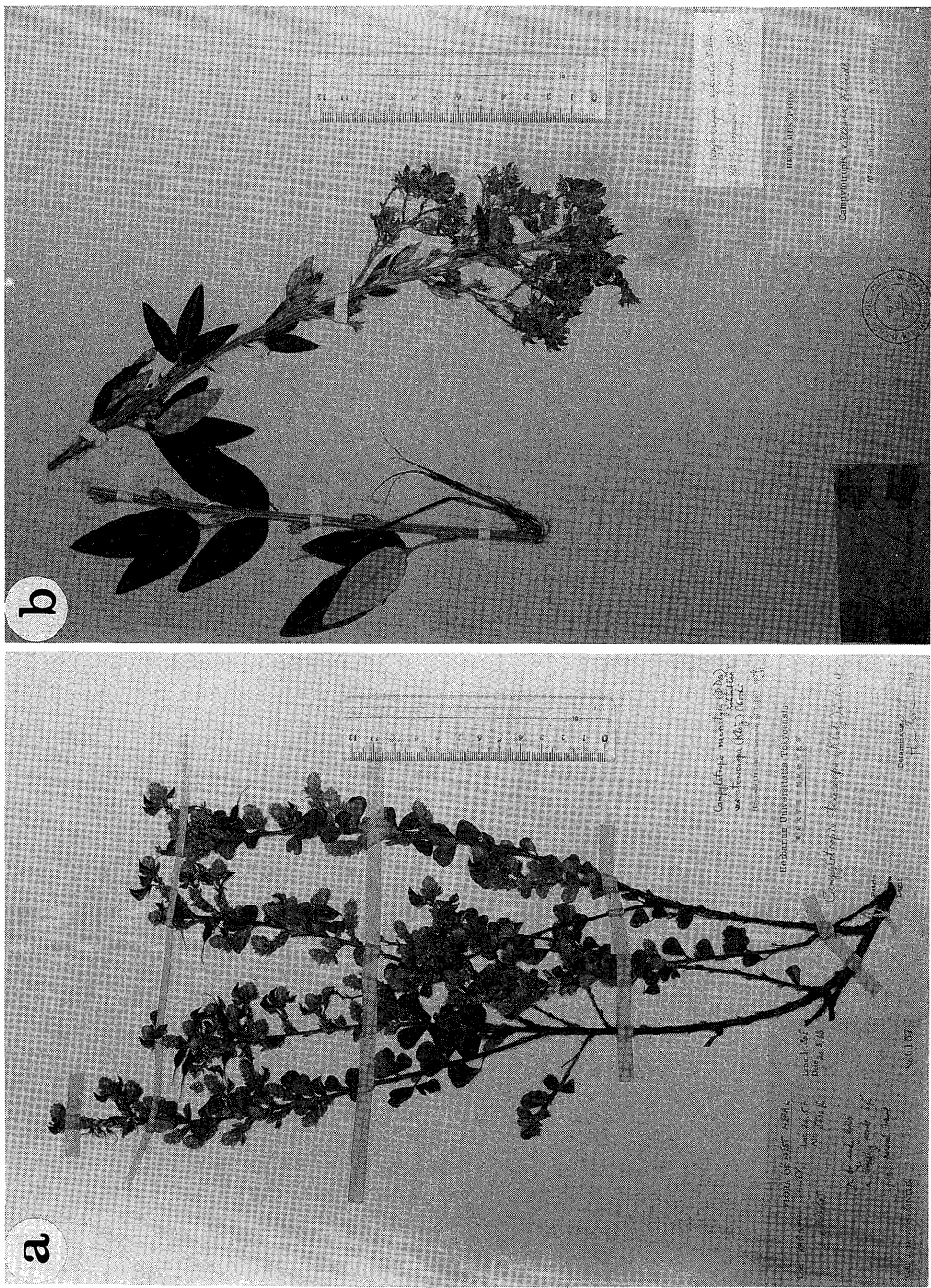


Fig. 46. a: *Campylotropis stenocarpa* (Klotzsch) Schindl. (voucher specimen: Sianton 6157, TI). b: *C. sulcata* Schindl. (Bons d' Anty Nov. 29, 1897, P).

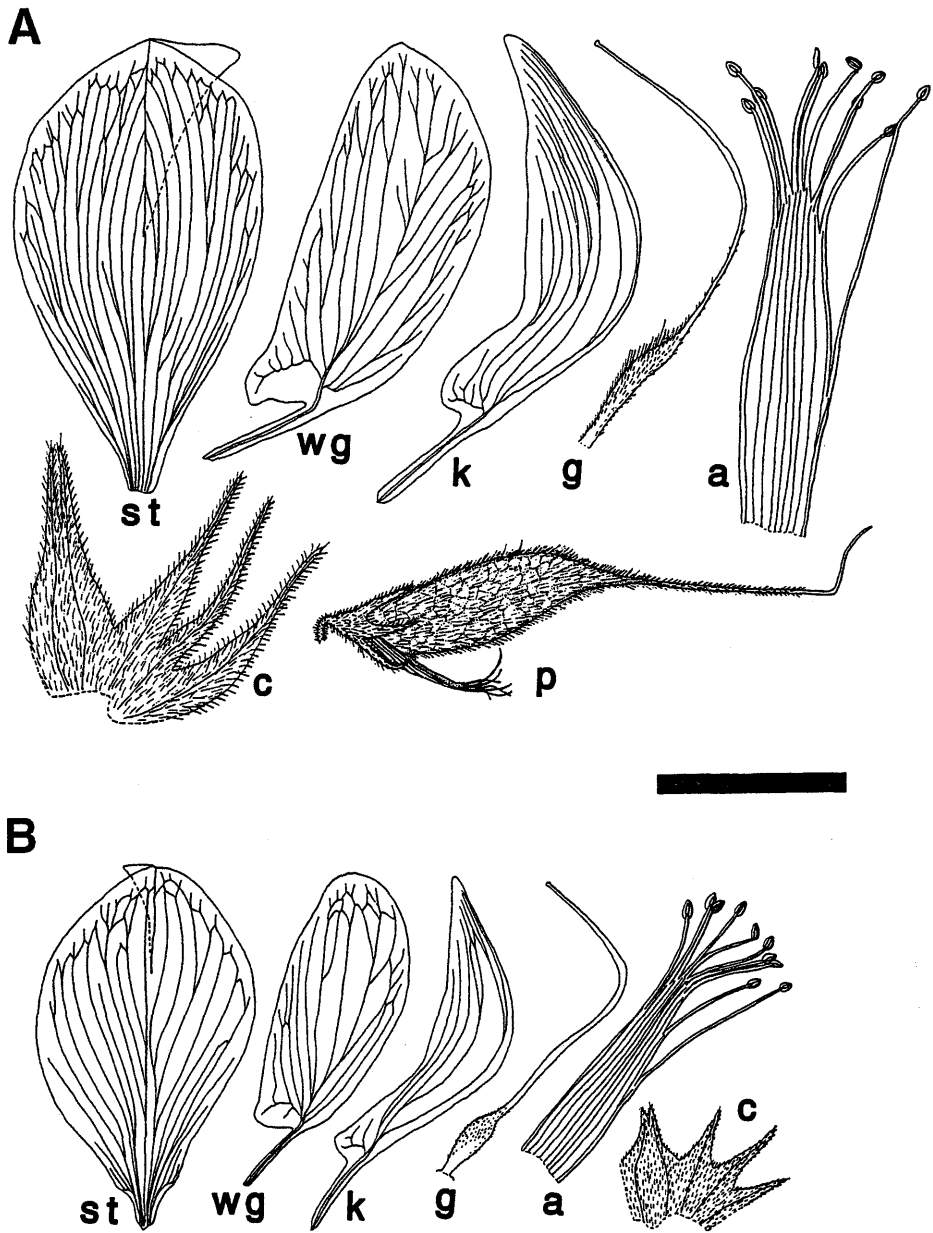


Fig. 47. Flowers and pod of *Campylotropis stenocarpa* (A. voucher specimen: Polunin & al. 809, E) and flower of *C. sulcata* (B. Yü 17571, A). a: androecium, c: calyx opened (outer surface), upper lobe in left, g: gynoeceum, k: keel-petal, p: pod, st: standard, wg: wing. Scale bar = 5 mm.

length. Gynoecia 9.5–10 mm long; ovary narrowly ovate, short hairy, ca. 1.8 mm long; style 7.5–8 mm long. Pods obliquely elliptic, ascending short hairy, ca. 6 mm long, ca. 3.5 mm wide.

Specimens examined: CHINA. **Yunnan.** Mekong (Bons d' Anty s.n., Nov. 29, 1897, P-holotype of *C. sulcata* Schindl.); Shweli-Salween divide, dry open situations amongst scrub. 6000–7000 ft. (G. Forrest 18452, E, K); Yanshan Xian, Chengbu, 1480 m (H. Li 2, KUN); Simao, Ganlanba (J. F. Rock 7059, Herb. US, photo of isotype of *C. rockii* Schindl. in TUS); Yanshan Xian, Ta-yai-kou, 1200 m (C. W. Wang 83590, KUN), loc. cit., 1800 m (C. W. Wang 84300, KUN), Ti-mi-ho-shan, 1200 m (C. W. Wang 84178, KUN); Fengqing Xian, in thicket. 1700 m (T. T. Yü 17571, A-holotype of *C. purpurascens* Ricker, E, KUN-isotype).

THAILAND. Doi Chiang Dao, open grassy forest. 1100–1400 m (A. F. G. Kerr 6509, K).

Distribution. China (Yunnan) and Thailand. (Fig. 48e)

This species is similar to *Campylotropis thomsonii*, but it is easily distinguished by the longer pedicels, usually glabrous upper surface of leaflets and absence of tawny hairs on the plants.

31. *Campylotropis tenuiramea* P.Y.Fu in Bull. Bot. Res., Harbin 7(4): 37, fig. 5 (1987) [Type: China. Yunnan. P. Y. Mao 1310 (PE holo.; KUN iso.)], & in Fl. Reip. Pop. Sin. 41: 109 (1995). [Figs. 49a, 50A]

A shrub, usually ca. 200 cm high; young stems with dense appressed short hairs. Leaves with a minute rachis; rachis 0.5–2.5 mm long. Stipules 1–3 mm long, 0.8–1 mm wide. Petioles 0.1–1.8 cm long, with dense ascending short hairs. Leaflets subcoriaceous, obovate to elliptic, retuse and mucronulate at the apex, obtuse or rounded at the base, upper surface sparsely pubescent, lower surface with subdense ascending sericeous hairs; terminal leaflets 0.8–3 cm long, 0.6–2 cm wide. Stipels absent. Inflorescences 2–3 cm long, several flowered at the top of peduncles; rachis densely appressed short hairy. Bracts 0.8–1 mm long.

Pedicels 5–6.5 mm long, densely appressed short hairy. Bracteoles 0.8–1 mm long, persistent at anthesis. Calyx densely appressed short hairy; tube ca. 1.5 mm long; lobes narrowly triangular, 2–3 mm long. Corolla purple; standard elliptic, obtuse at the apex, 11.5–12 mm long (including ca. 1 mm long claw), ca. 5 mm wide; wings ca. 10.5 mm long (including ca. 2 mm long claw), 3.5 mm wide; keel-petals 13.5–15 mm long (including ca. 2 mm long claw). Androecia ca. 12 mm long, vexillary stamen connate to staminal tube for about one-third of its length. Gynoecia ca. 13 mm long; ovary narrowly ovate, short hairy, ca. 2.6 mm long; style ca. 9.6 mm long.

Specimens examined: CHINA. **Yunnan.** Luquan Xian, Wumeng, 1800 m (P. Y. Mao 1310, PE-holotype, KUN-isotype).

Distribution. China (Yunnan). (Fig. 48f)

This species is known only the type specimen. Although it somewhat resembles *Campylotropis speciosa*, the flowers and inflorescences are enough different to distinguish each other. *Campylotropis tenuiramea* P.Y.Fu was characterized by the bracts smaller than the bracteoles and the monadelphous stamens (Fu 1987, 1995), but we could not confirm these characters.

32. *Campylotropis teretiracemosa* P.C.Li & C.J.Chen ex C.J.Chen in Acta Bot. Yunnan. 10: 434 (1988) [Type: China. Sichuan. Miyi Xian, Malong, on mountain slopes. 2450 m. C. F. Zhu 20048. (PE holo.)]. [Figs. 49b, 50B]

A shrub; young stems densely appressed or ascending yellowish pubescent. Leaves with a distinct rachis; rachis 3–3.5 mm long. Stipules 2–2.5 mm long, ca. 0.8 mm wide. Petioles 0.2–0.8 cm long, with dense appressed yellowish hairs. Leaflets subcoriaceous, oblong to elliptic, retuse and mucronulate at the apex, obtuse at the base, upper surface glabrous, lower surface densely yellowish ascending pubescent; ter-

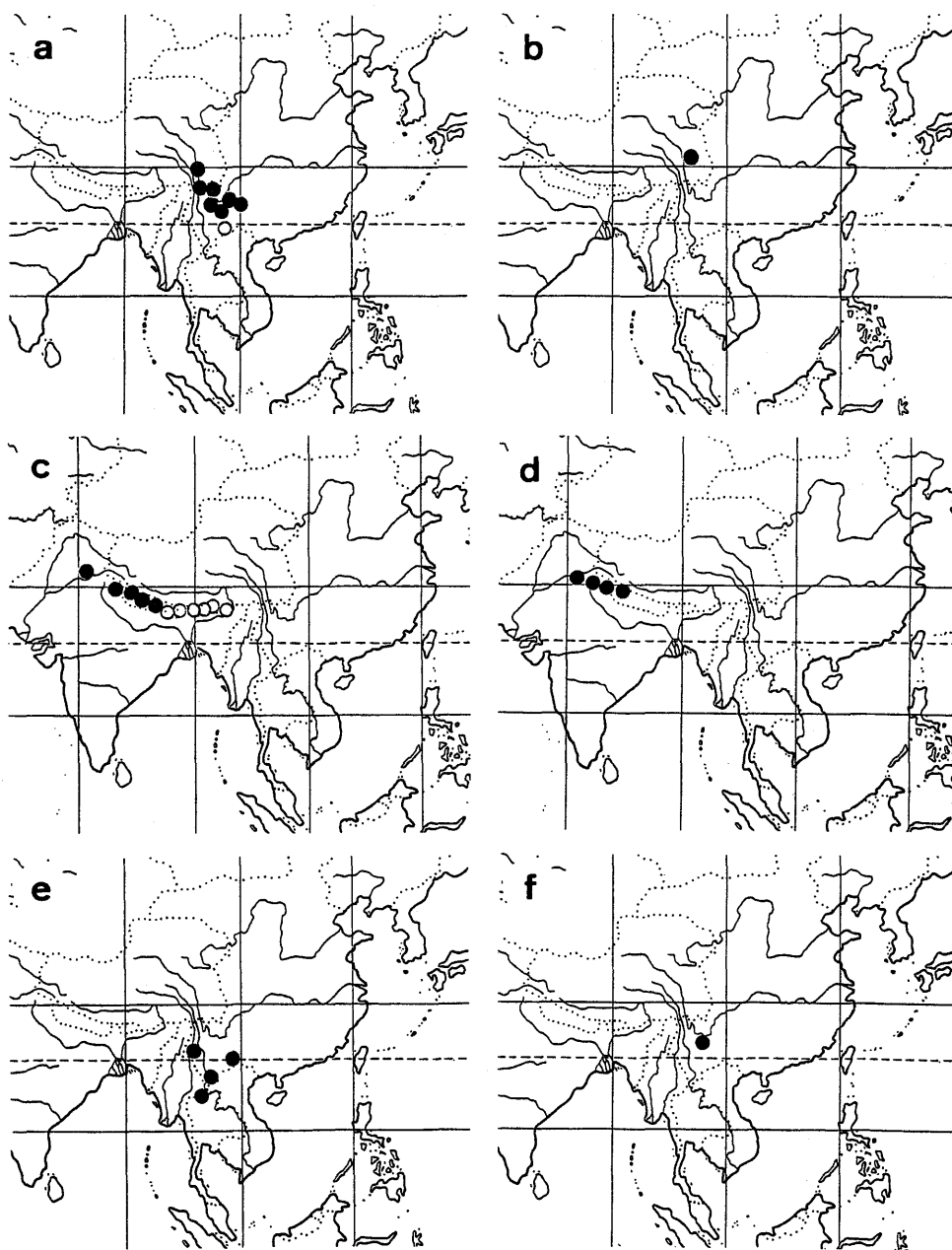


Fig. 48. Distribution of *Campylotropis* (V). a: *C. polyantha* (●: var. *polyantha*, ○: var. *neglecta*), b: *C. sargentiana*, c: *C. speciosa* (●: subsp. *speciosa*, ○: subsp. *eriocarpa*), d: *C. stenocarpa*, e: *C. sulcata*, f: *C. tenuiramea*.

minal leaflets 1.3–4.5 cm long, 0.7–1.5 cm wide. Stipels absent. Inflorescences 5–10 cm long, spike-like with many very small flowers on a distinct peduncle; rachis densely yellowish ascending pubescent. Bracts ca. 2 mm long, persistent at anthesis. Pedicels very short, ca. 1 mm long, densely yellowish ascending pubescent. Bracteoles ca. 0.8 mm long. Calyx densely yellowish pubescent; tube ca. 1.5 mm long; lobes triangular, 1.3–1.7 mm long. Corolla purple; standard elliptic, obtuse at the apex, ca. 7 mm long (including ca. 1 mm long claw), ca. 3 mm wide; wings ca. 6 mm long (including ca. 1.8 mm long claw), ca. 2 mm wide; keel-petals 9–9.5 mm long (including ca. 1.8 mm long claw). Androecia ca. 6.5 mm long, vexillary stamen connate to staminal tube for about one-fourth of its length. Gynoecia ca. 7 mm long; ovary ca. 1 mm long; style ca. 6 mm long. Pods obliquely obovate, ascending short hairy, 6.5–7.5 mm long, 3.3–4.5 mm wide. Seeds oblong to ovate, brown, $2.2\text{--}2.5 \times 1.2\text{--}1.5$ mm in size.

Specimens examined: CHINA. S.W.China (M. Chen 2179, KUN); **Sichuan**. Miyi Xian, Malong, 2450 m on mountain slopes (C. F. Zhu 20048, PE-holotype).

Distribution. China (Sichuan). (Fig. 58a)

This species is quite unique within the genus in having terete, spike-like inflorescences composed of many very small flowers (20–30 flowers, usually less than 20 flowers in most species).

33. *Campylotropis thomsonii* (Benth. ex Baker) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 427 (1912). [Figs. 51, 52A]

Lespedeza thomsoni Benth ex Baker in Hook.f., Fl. Brit. Ind. **2**: 144 (1876) [Type: India. Assam. Khasia. J. D. Hooker & T. Thomson s.n. (K holo.; A, BM, E iso.)].

Campylotropis rogersii Schindl. in Repert. Spec. Nov. Regni. Veg. **21**: 21 (1925) [Type: Myanmar (Burma). Tenasserim. Tavoy. Maungpok Nwalabo Ridge, 1000 m. C. G. Rogers 327T (CAL holo.), n. v.], **syn nov.**

Campylotropis kingdonii H. Ohashi in J. Jpn. Bot. **49**: 105 (1974) [Type: Myanmar (Burma). Mt. Victoria, alt. ca. 2300 m. F. Kingdon-Ward 22809 (BM holo.)], **syn. nov.**

A shrub; young stems with subdense appressed silky short hairs. Leaves with a distinct rachis; rachis 3–8 mm long. Stipules 5–6 mm long, ca. 1 mm wide. Petioles 1–3.5 cm long, with dense appressed or ascending silky hairs. Leaflets subcoriaceous, oblong to elliptic, retuse and mucronulate at the apex, rounded or obtuse at the base, upper surface glabrous or subdensely pubescent, lower surface with dense appressed silky hairs, sparsely mixed with glandular hairs; terminal leaflets 3–7 cm long, 1.2–2.5 cm wide. Stipels absent. Inflorescences 5–10 cm long, sometimes paniculate; rachis and pedicels with dense ascending silky hairs, sparsely mixed with glandular hairs. Bracts 2–4 mm long, caducous before anthesis. Pedicels 3–10 mm long. Bracteoles 1–2 mm long. Calyx with dense appressed or ascending silky hairs; tube 1.5–2 mm long; lobes narrowly triangular, 1.5–2.2 mm long. Corolla purple; standard elliptic, obtuse at the apex, 6.5–8.5 mm long (including ca. 1.5 mm long claw), 3.5–5 mm wide; wings 6–8 mm long (including ca. 2 mm long claw), ca. 2.8 mm wide; keel-petals 9.5–11 mm long (including ca. 2 mm long claw). Androecia 8–9.5 mm long, vexillary stamen connate to staminal tube for about one-fourth of its length. Gynoecia ca. 9.5 mm long; ovary narrowly ovate, short hairy, ca. 2 mm long; style ca. 6.5 mm long. Pods obliquely obovate, rounded at the apex, appressed short hairy, 7–8 mm long, 3.5–4 mm wide. Seeds oblong, blackish purple, ca. 2.5×1.5 mm in size.

Distribution. India (Assam), Myanmar (Burma) and Vietnam. (Fig. 58b)

This species is characterized by dense, appressed, silky hairs on the lower surface of the leaflets and the small flowers with glandular hairs on the pedicels.



Fig. 49. a: *Campylotropis tenuiramea* P.Y.Fu (voucher specimen: Mao 01310, PE). b: *C. teretiracemosa* P.C.Li & C.J.Chen ex C.J.Chen (Zhu 20048, PE).

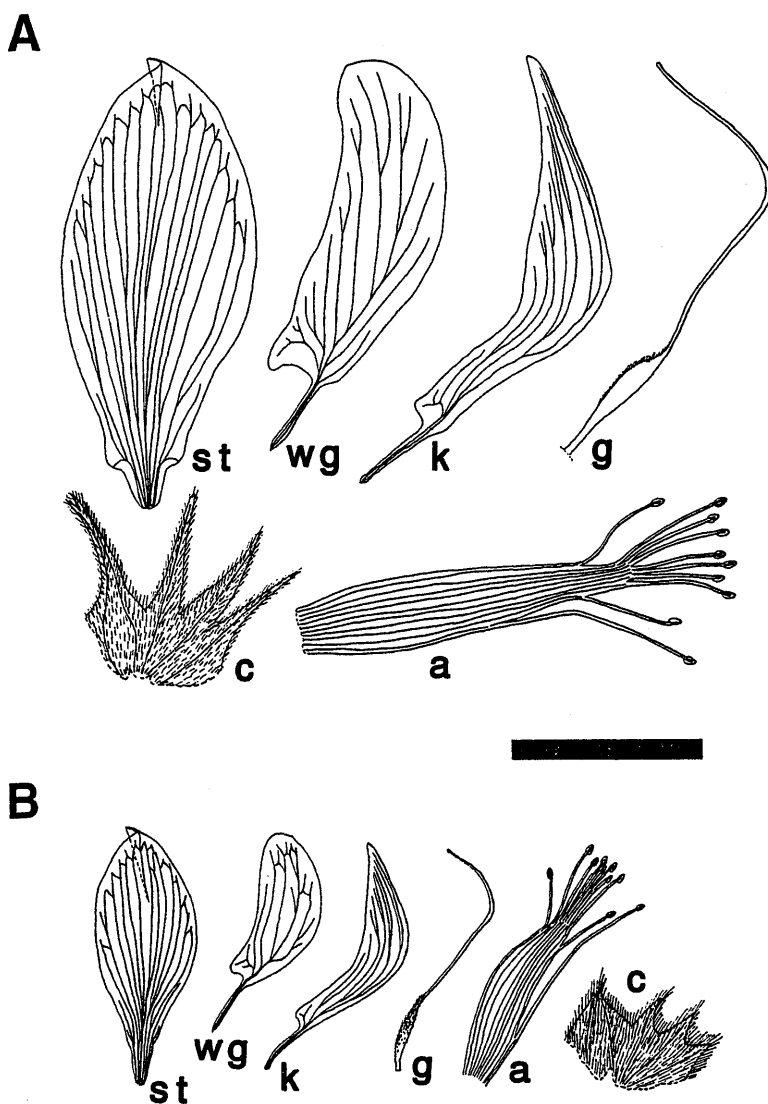


Fig. 50. Flowers of *Campylotropis tenuiramea* (A. voucher specimen: Mao 01310, PE) and *C. teretiracemosa* (B. Chen 2179, KUN). a: androecium, c: calyx opened (outer surface), upper lobe in left, g: gynoeceum, k: keel-petal, st: standard, wg: wing. Scale bar = 5 mm.

Campylotropis splendens, described from southern Vietnam, is the same species as *C. thomsonii*, but apparently differs from it in having pubescent leaflets and also in distribution. We treat them as separate subspecies.

Key to the subspecies of *C. thomsonii*

1. Upper surface of leaflets glabrous.....

.....subsp. *thomsonii*
1. Upper surface of leaflets subdensely pubescent.....subsp. *splendens*

33-1. *Campylotropis thomsonii* (Benth. ex Baker) Schindl. subsp. **thomsonii**

[Figs. 51a, 52A]

Specimens examined: INDIA. Assam. Khasia, 4500

ft. (C. B. Clark 16632A, BM); Shillong, 5200 ft. (C. B. Clark 38860A, BM); Khasia, 5000 ft. (J. D. Hooker & T. Thomson s.n., K-holotype of *Lespedeza thomsonii* Benth. ex Baker, A, BM, E -isotype); Meghalaya, Khasi and Jaintia Hills, 3500–4000 ft. (T. Yandell 316, TI); Shillong, in pine forest. 5000 ft. (F. Kingdon-Ward 18827, A, BM).

MYANMAR (BURMA). Mt. Victoria, 2300 m (F. Kingdon-Ward 22809, BM-holotype of *C. kingdonii* H. Ohashi, photo in TI, TUS).

Distribution. India (Assam) and Myanmar (Burma). (Fig. 58b)

33–2. *Campylotropis thomsonii* (Benth. ex Baker) Schindl. subsp. **splendens** (Schindl.) Iokawa & H. Ohashi, **comb. nov.** [Fig. 51b]

Campylotropis splendens Schindl. in Engl. Bot. Jahrb. **54**: 65 (1916) [Type: Vietnam, Dalat. Lecomte and Finet 1518 (P holo.)]; Thuân in Fl. Camb. Laos Viêt. **23**: 146 (1987), excl. syn. cit. *L. lanceolata* Dunn.

Lespedeza splendens (Schindl.) Gagnep. in Lecomte, Fl. Gén. Indoch. **2**: 523 (1920).

Specimens examined: VIETNAM. Lam Dong, Dalat (M. Evrard 1256, P; H. Lecomte & A. Finet 1518, P-holotype of *C. splendens* Schindl.), Massif du Lang Bian, 2000 m (M. Poilane 30650, P), Cam Ly (Schmid s.n., Jan. 1954, P), Manline (Tixier s.n., Dec. 8, 1961, P).

Distribution. Vietnam. (Fig. 58b)

34. *Campylotropis trigonoclada* (Franch.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 430 (1912), in Sargent, Pl. Wils. **2**: 114 (1914), in Repert. Spec. Nov. Regni. Veg. Beih. **49**: 261 (1928), & in Hand.-Mazz., Symb. Sin. **7**: 574 (1933); Fl. Illust. Pl. Prim. Sin. **534**, fig. 529 (1955); Icon. Cormophyt. Sin. **2**: 465, fig. 2659 (1972); H. Ohashi in J. Jpn. Bot. **49**: 332 (1974); C. Y. Wu & al. Index Fl. Yunnan. **1**: 576 (1984); P. Y. Fu in Bull. Bot. Res., Harbin **7**(4): 31 (1987), & in Fl. Reip. Pop. Sin. **41**: 105 (1995).

[Figs. 52B, 53]

Lespedeza trigonoclada Franch., Pl. Delavay. 167, fig. 42 (1890) [Type: China. Yunnan. Delavay 2715 & 2743 (P syn.), n. v.]; H. Lév. Fl. Kouy-Tchéou 237 (1914),

& Cat. Pl. Yun-Nan 159 (1916).

Lespedeza trigonoclada Franch. var. *angustifolia* Pamp. in Nouvo Giorn. Bot. Ital., n.s., **17**: 24 (1910) [Type: China. Yunnan-sen, montagnes. Avril. Maire 106 (UC syn., n. v., photo in A), ravins du Mont Tchong-chang. Ducloux 386 (syn., n. v.)].

Lespedeza trigonoclada Franch. f. *intermedia* Pamp. in Nouvo Giorn. Bot. Ital., n.s., **17**: 24 (1910) [Type: China. Yunnan-sen, montagnes. Avril. Maire 101 (holo.), n. v.].

Lespedeza angulicaulis Harms ex Schindl. in Repert. Spec. Nov. Regni. Veg. **9**: 522 (1911) [Type: China. Yunnan. Mengtze, 1500 m. A. Henry 9135 (B holo., n. v.; A, E iso.)].

Lespedeza balfouriana Diels ex Schindl. in Repert. Spec. Nov. Regni. Veg. **9**: 522 (1911) [Type: China. Yunnan. the eastern flank of the Tali Range. G. Forrest 4241 (E holo.; K iso.)]; in Not. Bot. Gard. Edinb. **36**: 11, t. 6 (1913); H. Lév., Cat. Pl. Yun-Nan 157 (1916).

Campylotropis balfouriana (Diels ex Schindl.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 430 (1912), & in Repert. Spec. Nov. Regni. Veg. Beih. **49**: 259 (1928).

Campylotropis alata Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 431 (1912) [Type: China. Yunnan. Pan-pien-kai, 2500 m. Maire 3241 (Herb. Bonati, fide Schindler, TUB holo., n. v.; UC iso, n. v., photo. in A)].

Lespedeza alata (Schindl.) H. Lév., Cat. Pl. Yun-Nan 157 (1916).

A shrub, usually 100–300 cm high; young stems triquetrous, sparsely with appressed short hairs or glabrous, older part terete, glabrescent. Leaves with a distinct rachis; rachis 2–12 mm long. Stipules deltoid-ovate, scarious, decurrent to the ridge of stems, 5–18 mm long, 1.5–6 mm wide, abaxial surface glabrous or sparsely appressed short hairy. Petioles bisulcate or convex above, often winged along both side, ridged beneath, 0.5–

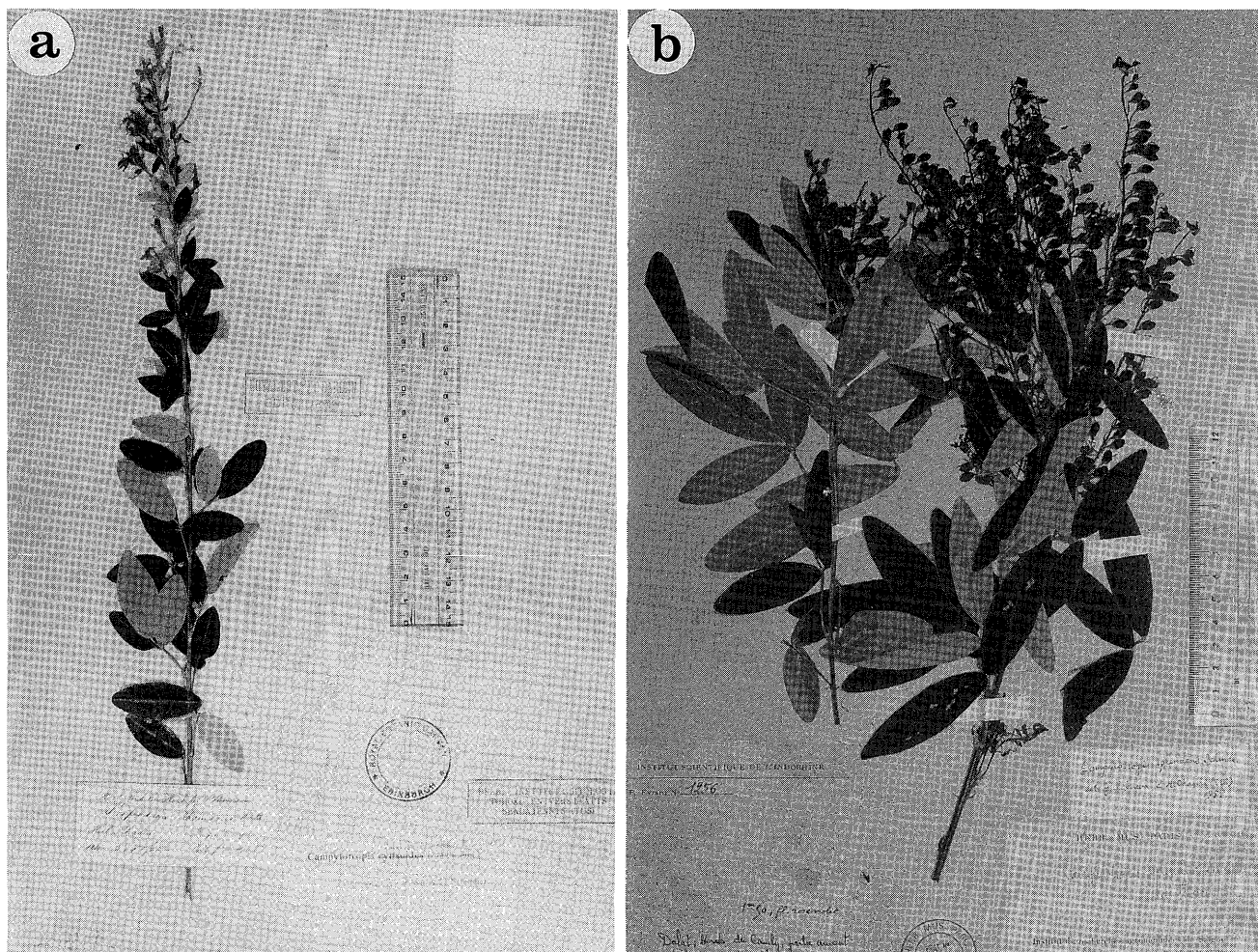


Fig. 51. a: *Campylotropis thomsonii* (Benth. ex Baker) Schindl. subsp. *thomsonii* (voucher specimen: Hook. f. & Thomson s.n., E). b: *C. thomsonii* (Benth. ex Baker) Schindl. subsp. *splendens* (Schindl.) Iokawa & H. Ohashi (Evrard 1256, P).

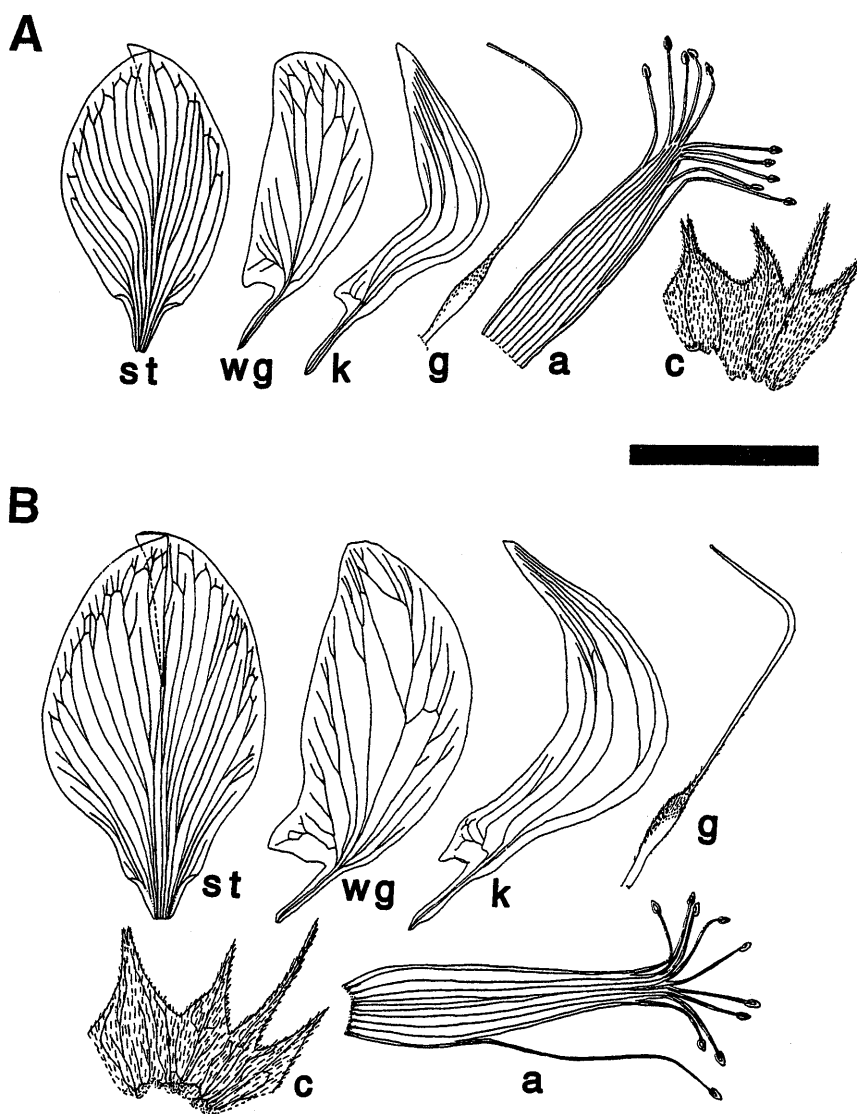


Fig. 52. Flowers of *Campylotropis thomsonii* (A. voucher specimen: Hook. f. & Thomson s.n., E) and *C. trigonoclada* var. *trigonoclada* (B. Forrest 4241, E). a: androecium, c: calyx opened (outer surface), upper lobe in left, g: gynoecium, k: keel-petal, st: standard, wg: wing. Scale bar = 5 mm.

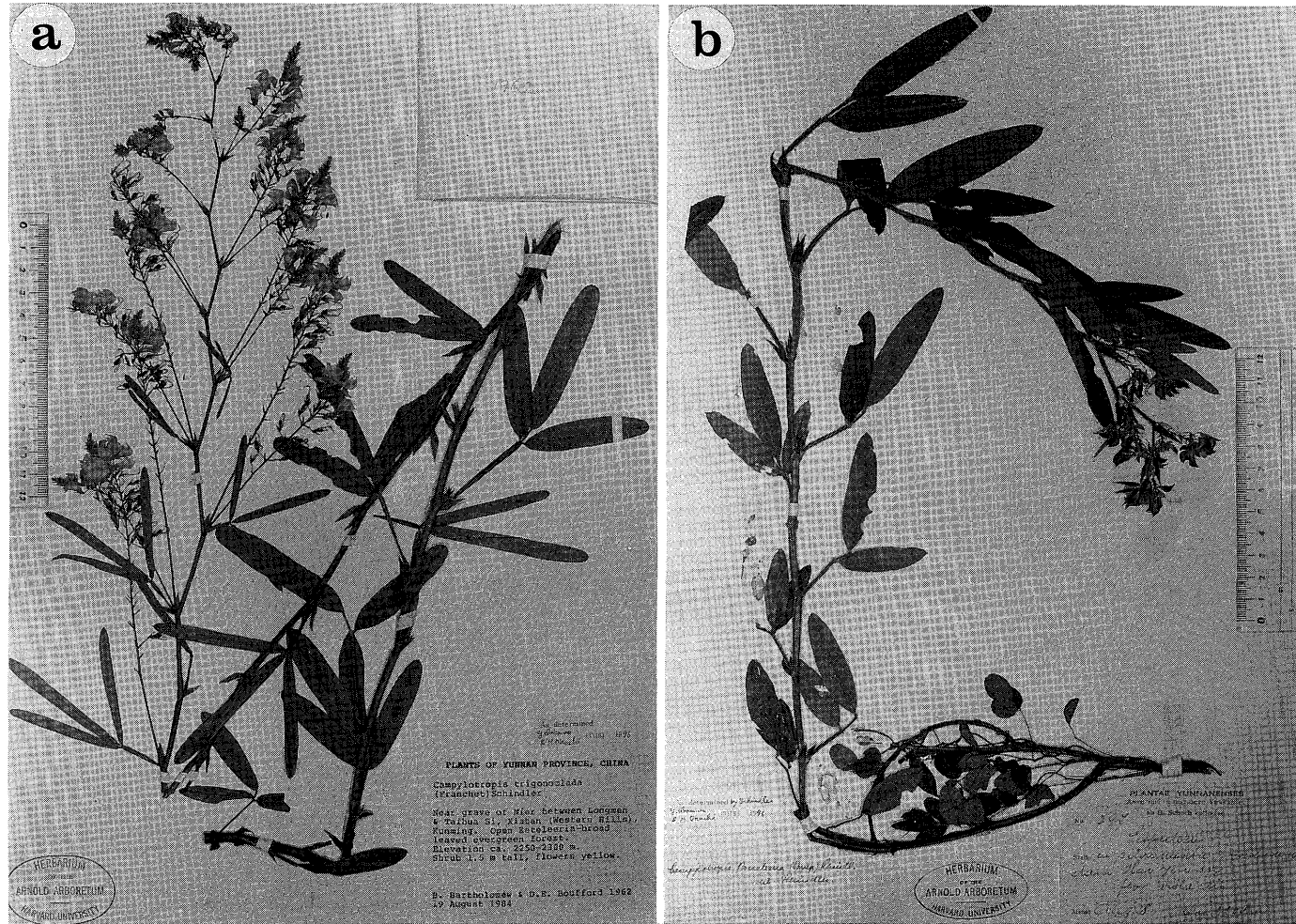


Fig. 53. a: *Campylotropis trigonoclada* (Franch.) Schindl. var. *trigonoclada* (voucher specimen: Bartholomew & Boufford 1962, A). b: *C. trigonoclada* (Franch.) Schindl. var. *bonatiana* (Pamp.) Iokawa & H. Ohashi (Schoch 297, A).

6 cm long, sparsely appressed short hairy or glabrous. Leaflets coriaceous, obovate, oblong, ovate to narrowly ovate or elliptic, rarely linear, retuse and mucronulate at the apex, obtuse or cuneate at the base, upper surface glabrous, lower surface sparsely appressed short hairy or glabrescent; terminal leaflets 1.2–5 cm long, 0.8–3 cm wide. Stipels rarely present, linear, 1–2 mm long. Inflorescences 3–26 cm long, sometimes paniculate; rachis and pedicels sparsely with appressed or ascending short hairs or glabrescent. Bracts 2–6 mm long. Pedicels 3–10 mm long. Bracteoles 1–3 mm long. Calyx with subdense appressed short hairs; tube 2–2.5 mm long; lobes narrowly triangular, lower lobe 3–4.5 mm long, longer than the others, upper lobe 2–2.5 mm long, lateral lobes 2–2.5 mm long. Corolla yellow or purple; standard elliptic, obtuse at the apex, 9–11 mm long (including ca. 1 mm long claw), 5–7 mm wide; wings 9–10.5 mm long (including ca. 2 mm long claw), 3.5–4.5 mm wide; keel-petals 12–15 mm long (including ca. 2 mm long claw). Androecia 10–10.5 mm long, vexillary stamen connate to staminal tube for about one-fourth of its length. Gynoecia ca. 11.5 mm long; ovary narrowly ovate, short hairy, 2.2–2.5 mm long; style 8–8.5 mm long. Pods obliquely obovate, rounded at the apex, ascending short hairy, 6–8 mm long, 4–4.5 mm wide. Seeds oblong, purplish brown, $3\text{--}3.7 \times 2$ mm in size.

Distribution. China (Guangxi, Guizhou, Sichuan and Yunnan). (Fig. 58c)

Campylotropis trigonoclada is unique in the genus in having sharply triquetrous young branches. The shape of leaflets varies widely from obovate to linear, especially narrow in the upper leaves. Var. *trigonoclada* is conspicuous in having yellow flowers.

Key to the varieties of *C. trigonoclada*

1. Flowers purple; young branches, lower surface of leaflets and inflorescence rachis

pubescent.....var. *bonatiana*

1. Flowers yellow; plants glabrescent.....
.....var. *trigonoclada*

34–1. *Campylotropis trigonoclada* (Franch.) Schindl. var. *trigonoclada* [Figs. 52B, 53a]

Specimens examined: CHINA. **Guizhou.** Puding Xian, 1800 m (Anshun Exped. 1423, KUN); locality unknown (E. Bodinier 1820D, E; J. Cavalerie 720, E, K); Luho, Bei Yang, 333 m (Y. Tsiang 7201, A); Tai-li-shu to Anlung, 483 m (Y. Tsiang 7354, A); Konchang, Kiensi (Y. Tsiang 8830, A). **Sichuan.** Muli, 8000–9000 ft. (G. Forrest 22414, E); O-pien Xian, 1100–1300 m (Y. S. Liu 2266, A); W. Sichuan (E. H. Wilson 2938, A); locality unknown (E. H. Wilson s.n., A); Xichang Xian (Wu 6500, KUN). **Yunnan.** Kunming, Xishan, 2250–2300 m (B. Bartholomew & D. E. Boufford 1962, A, E, KYO); Gan-pin (E. Bodinier 1820, E); locality unknown (J. Cavalerie 720, E); Kiao kia (M. F. Decloux 5799, A); Longmin tcheou (M. F. Decloux 6805, BM, E); Si-chour Xian (K. M. Feng 11635, A), Hsin-cheih (K. M. Feng 12604, A); Hocking to Lijiang valley, Sung Kwei, alt. 7000–10000 ft. moist situations, side of streams, etc., common (G. Forrest 103, E, K); Eastern flank of the Dali Range (G. Forrest 4241, E–holotype of *Lespedeza balfouriana* Diels ex Schindl., K–isotype); Dali Range, 6500–8000 ft. (G. Forrest 6954, E, K); Dali Xian, 10000 ft. (G. Forrest 11552, A, E, K, MO); Mid.W. Yunnan (G. Forrest 28065, E); Mengtze (Hancock 72, K); Hsiao-chagai, 1650–1950 m (Handel-Mazzetti 5697, E); Mengzi, 4600 ft. (A. Henry 9135, A, E–isotype of *Lespedeza anglicaulis* Harms ex Schindl.); Mile (A. Henry 9135A, A); Mengzi, 5000 ft. (A. Henry 9622, MO), locality unknown (E. E. Maire 4, E); Yunnan, Montagnes (Maire 106, A, photo of syntype of *Lespedeza trigonoclada* var. *angustifolia* Pamp.); Huize Xian, Pan-pien-kai, 2990 m (E. E. Maire 302, E), loc. cit., 2900 m (E. E. Maire 366, E, K), loc. cit., 2990 m (E. E. Maire 1168, E), loc. cit. (E. E. Maire 10131, K, photo), loc. cit., 2500 m (B. P. Maire 3241, A, photo of isotype of *C. alata* in UC); Mt. Leangwang (McLaren's collectors U151, E); Pai-ching (McLaren's collectors U235, E); Dali Xian (J. F. Rock 6420, A); Dali Xian, Mt. Lianwang (McLaren's collectors L107A, E), Mt. Nungtsian (McLaren's collectors 128c, A, BM, E; 182a BM); Tsangshan Range, west of Dali (J. F. Rock 6420, E); Tengyuih, 1800 m (C. Schneider 2652, A); Tunggweh, Koching, 2600 m (C. Schneider 2708, A); Hsi shan, 2300 m (O. Schoch 270, A); Te yen tsin (P. S. Ten 12, A); Nonfautchiang, Yangtze (P. S. Ten 191, E); Kunming, Yongfeng Si (F. T. Wang 365, A); Mienning, Taniuchan, 1500 m (T. T. Yü

18207, A, E); Konggang (unknown collector 720, E).

Distribution. China (Guangxi, Guizhou, Sichuan and Yunnan). (Fig. 58c)

34–2. *Campylotropis trigonoclada* (Franch.) Schindl. var. **bonatiana** (Pamp.) Iokawa & H.Ohashi, **comb. nov.** [Fig. 53b]

Lespedeza bonatiana Pamp. in Nuovo Giorn. Bot. Ital., n.s., **17**: 19 (1910) [Type: China. Yunnan. montagnes a l'ouest de la ville, dans les bois. 12 Sept. 1904. Ducloux 387 (P syn., n. v.), Montagnes. Sept. 1904. Maire 95 (UC syn., n. v., photo in A)]; H. Lév., Cat. Pl. Yun-Nan 157 (1916).

Campylotropis bonatiana (Pamp.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 429 (1912) & **22**: 287 (1926), & in Hand.-Mazz., Symb. Sin. **7**: 574 (1933); E.Peter, Act. Hort. Gothob. **13**: 438 (1940); Fl. Illust. Pl. Prim. Sin. 535 (1955); C.Y.Wu & al., Index Fl. Yunnan. **1**: 573 (1984); P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 31 (1987), & in Fl. Reip. Pop. Sin. **41**: 105 (1995).

Campylotropis franchetiana Lingelsh. & Borza in Repert. Spec. Nov. Regni. Veg. **13**: 387 (1914) [Type: China. Yunnan. Talifu, in einer Schlucht kurz vor Yung-kuan, zwischen Pu-peng und Scha-tschiau, 2300 m. 22.VIII.1913. Limpricht 915 (WRS� holo.), n. v.]; C.Y.Wu & al., Index Fl. Yunnan. **1**: 573 (1984).

Specimens examined: CHINA. **Yunnan**. locality unknown (Beauvais 1274, K; Ducloux 511, K); Dali as "Tali" (G. Forrest 11553, 27972, E); Mengzi, 5000 ft. (A. Henry 9622, A, E); Montagnes, Sept. 1904. (Maire 95, CAL-syntype of *Lespedeza bonatiana* Pamp., photo in A); Ko-koui, 1800 m (E. E. Maire 321, E); Yaoan Xian, 3200 m (E. E. Maire 431, BM, E); Pro Vicar Apostolic (E. E. Maire 1617, 2512, E); Mt. Loshuieh summit (McLaren's collectors V102A, E); West Mt. of Tsu Hsieng (McLaren's collectors L120, E); Yaoan Xian, 3200 m (McLaren's collectors F220, F238, E, K, KYO); West of Talifu, Mekong watershed, en route to Youngchang and Tengyueh (Rock 6607, K); Salween versus Rupian (C. Schneider 2568 A); in montibus inter Yungchang fu et fluv. Mekong, 1600–1800 m (C. Schneider 2665, K); Hai-yen-sse,

Pagodam, 2200 m (O. Schoch 297, A).

Distribution. China (Yunnan).

35. *Campylotropis wenshanica* P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 35, fig. 4 (1987), ut *C. wenshaaica* [Type: China. Yunnan. H. T. Tsai 58-8560 (KUN holo.)], & in Fl. Reip. Pop. Sin. **41**: 109 (1995).

[Figs. 54a, 55A]

A shrub, ca. 200 cm high; young stems sparsely with appressed short hairs. Leaves with a distinct rachis; rachis 2–10 mm long. Stipules 2–9 mm long, 0.5–1 mm wide. Petioles 2–7 cm long, sparsely appressed short hairy. Leaflets subcoriaceous, widely obovate to elliptic, retuse and mucronulate at the apex, obtuse at the base, upper surface glabrous, lower surface sparsely appressed short hairy; terminal leaflets 2–5 cm long, 1.7–4 cm wide. Stipels absent. Inflorescences 1.5–9 cm long, usually paniculate. Bracts 1.3–2 mm long. Pedicels 3–7 mm long, ascending short hairy. Bracteoles 0.8–1 mm long. Calyx sparsely with appressed short hairs; tube 2–2.2 mm long; lobes narrowly triangular, 2–2.4 mm long. Corolla purple; standard elliptic, obtuse at the apex, ca. 10 mm long (including ca. 0.7 mm long claw), ca. 5.5 mm wide; wings ca. 9.5 mm long (including ca. 2.5 mm long claw), ca. 3.3 mm wide; keel-petals 13–14.5 mm long (including ca. 2.5 mm long claw). Androecia ca. 9.5 mm long, vexillary stamen connate to staminal tube for about one-third of its length. Gynoecia ca. 10.5 mm long; ovary ca. 2.5 mm long; style ca. 7 mm long. Pods obliquely narrowly obovate, rounded at the apex, glabrous, 9–11 mm long, 3.5–4 mm wide.

Specimens examined: CHINA. **Yunnan**. Xichou Xian, 1500 m (H. T. Tsai 58-8515, KUN-paratype; H.T.Tsai 58-8527, KUN-paratype), 1600 m (H.T.Tsai 58-8560, KUN-holotype).

Distribution. China (Yunnan). (Fig. 58d)

This species resembles *Campylotropis alopochroa*, *C. hirtella*, *C. falconeri* and *C.*

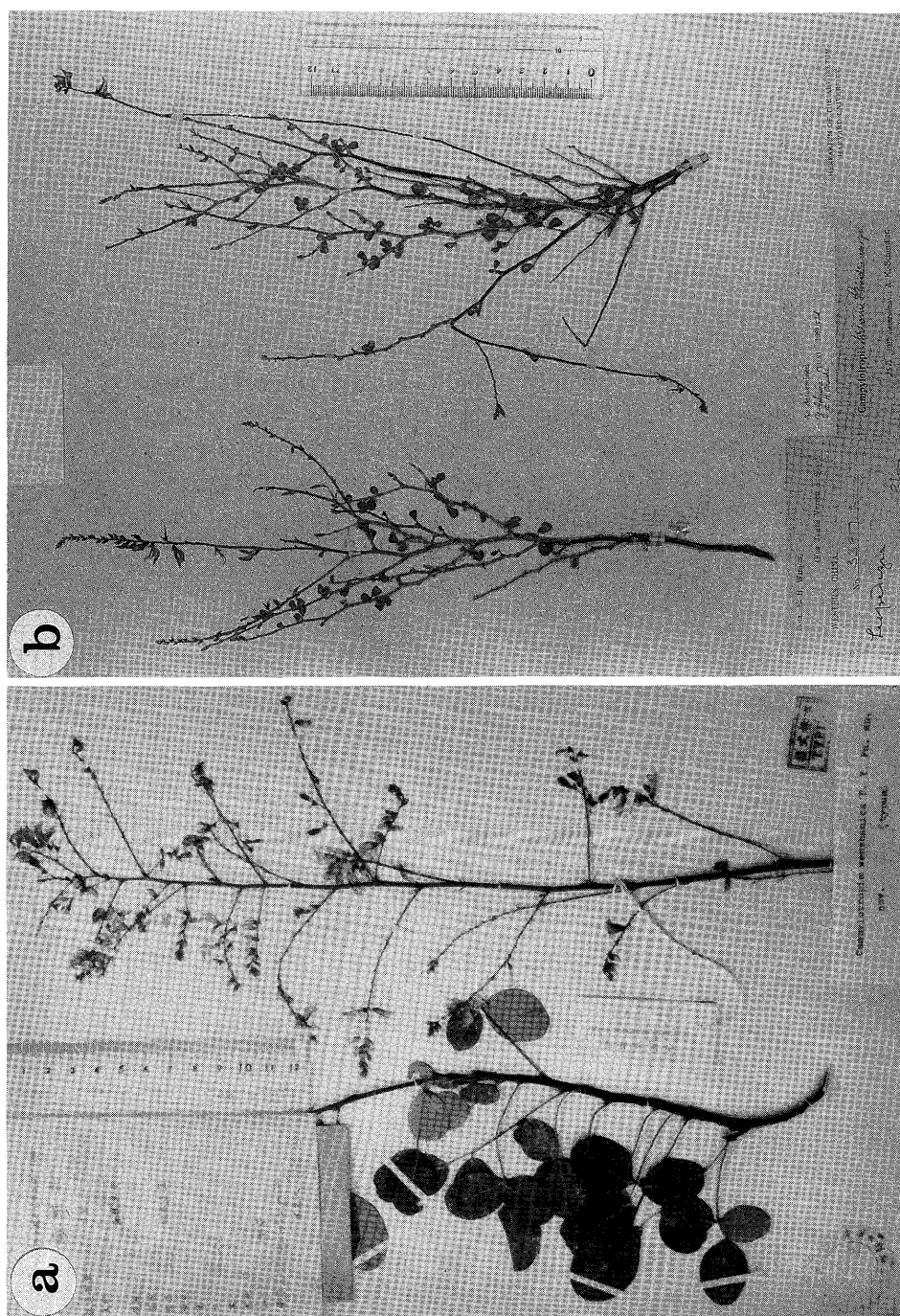


Fig. 54. a: *Campylotropis wenshanica* P.Y.Fu (voucher specimen: Tsai 58-8560, KUN). b: *C. wilsonii* Schindl. (Wilson 3387a, A).

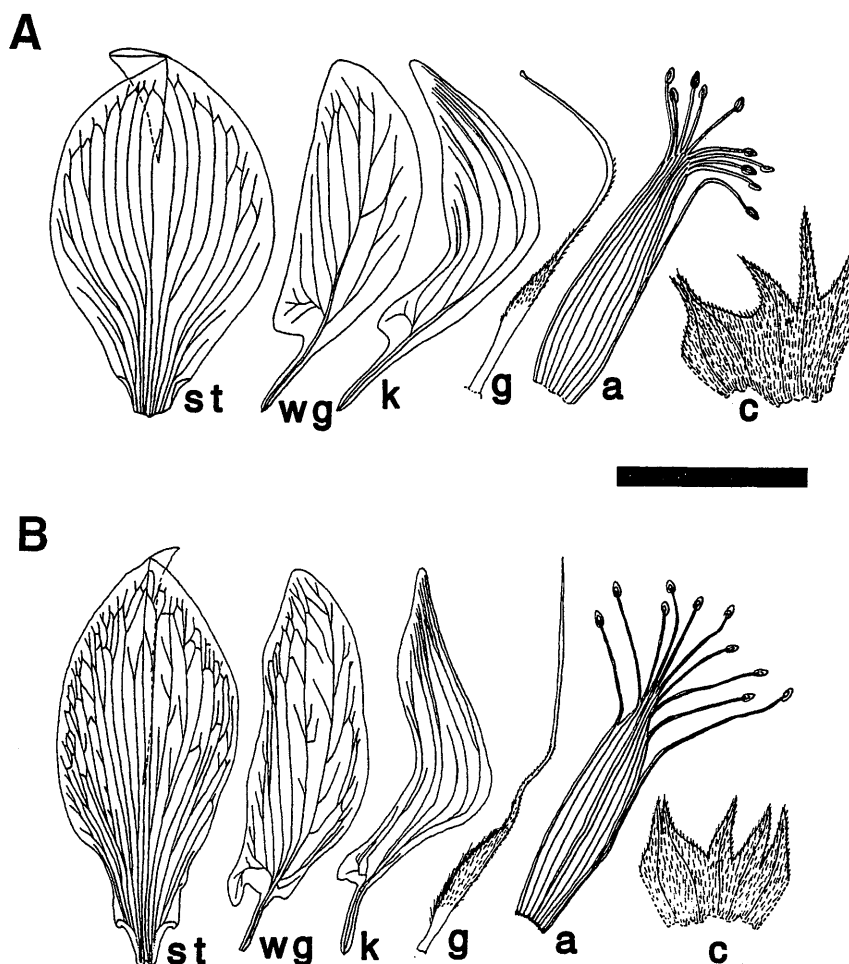


Fig. 55. Flowers of *Campylotropis wenshanica* (A. voucher specimen: Tsai 58-8527, KUN) and *C. wilsonii* (B. Wilson 3387a, A). a: androecium, c: calyx opened (outer surface), upper lobe in left, g: gynoecium, k: keel-petal, st: standard, wg: wing. Scale bar = 5 mm.

macrocarpa in the overall appearance of the inflorescences, that is, looking like a large terminal panicle composed of several upper racemes with reduced subtending leaves, but those species have many conspicuous glandular hairs on the inflorescences, whereas *C. wenshanica* does not.

36. ***Campylotropis wilsonii*** Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 343 (1912) [Type: China. Sichuan. Wilson 3387 (A syn.; PE isosyn.), 3387a (A syn.), Potanin

s.n. (LE syn.; PE isosyn.)], & in Sargent, Pl. Wils. **2**: 114 (1914); E.Peter, Act. Hort. Gothob. **13**: 438 (1940); Fl. Illust. Pl. Prim. Sin. **538**, fig. 533 (1955); P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 51 (1987), & in Fl. Reip. Pop. Sin. **41**: 127 (1995).

[Figs. 54b, 55B]

Campylotropis yajiangensis P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 32, fig. 3 (1987) [Type: China. Sichuan. Yajiangxian: in declivibus montanis alt. 2800 m. Y. Q. He 8227 (WUG holo.), n. v.], & in Fl. Reip.

Pop. Sin. **41**: 108 (1995), p. p., excl. var. *deronica* P.Y.Fu, **syn. nov.**

A shrublet, usually 30–100 cm high; young stems sparsely with appressed short hairs. Leaves with a minute rachis; rachis 1–3 mm long. Stipules ovate, 1–2.5 mm long, 0.5–1 mm wide. Petioles 0.1–1.4 cm long, sparsely covered with appressed short hairs. Leaflets coriaceous, obdeltoid to obcordate or obovate, retuse and mucronulate at the apex, obtuse or cuneate at the base, upper surface glabrous or sparsely pubescent, lower surface sparsely or subdensely appressed short hairy; terminal leaflets 0.4–0.9 cm long, 0.3–0.8 cm wide. Stipels absent. Inflorescences axillary or terminal racemose, 1–12 cm long; rachis and pedicels with sparse ascending short hairs, rarely mixed with glandular hairs. Bracts 1–1.5 mm long, caducous before anthesis. Pedicels 0.8–2.5 mm long. Bracteoles 0.5–1 mm long. Calyx subdensely ascending short hairy rarely mixed with glandular hairs; tube 1.5–2 mm long; lobes narrowly triangular, 1.6–2 mm long. Corolla purple; standard elliptic, obtuse at the apex, ca. 11 mm long (including ca. 1 mm long claw), 5–7 mm wide; wings 10–11 mm long (including ca. 1.5 mm long claw), 3–3.5 mm wide; keel-petals 11–13 mm long (including ca. 1.7 mm long claw). Androecia ca. 8.5 mm long, vexillary stamen connate to staminal tube for about one-fourth of its length. Gynoecia ca. 11 mm long; ovary puberulent, ca. 3.5 mm long; style ca. 6.6 mm long. Pods obliquely narrowly ovate, obtuse at the apex, with ascending short hairs, 8–12 mm long, 3.5–4 mm wide. Seeds obliquely oblong.

Specimens examined: CHINA. **Sichuan**. Litang Xian (F. T. Fang 21671, PE); in declivibus montanis Yajiang Xian, alt. 2880 m (Z. T. Guan 52-0208, PE—paratype of *C. yajiangensis* P.Y. Fu), loc. cit., alt. 2850 m (Z. T. Guan 56-0422, PE—paratype of *C. yajiangensis* P.Y.Fu); Lifan, 6500 ft. (S. Y. Hu 2135 A); Kangding (Dajianlu) (G. N. Potanin s.n., LE—syntype of *C. wilsonii* Schindl., PE—isosyntype); Zhongdian Xian, 2100 m (Qinghai-Xizang Exped. 2077, PE); inter

Wen-chuan-hsien et Hsin-pu-kuan, ca. 1300 m (H. Smith 2282, A); Route to Li-fan Xian, 2150 m (F. T. Wang 21671, A); Min valley, 5000–7000 ft. (E. H. Wilson 3387, A—syntype of *C. wilsonii* Schindl., PE—isosyntype); locality unknown (E. H. Wilson 3387a, A—syntype of *C. wilsonii* Schindl.); Lungan fu, 4000 ft. (E. H. Wilson 4618, A); locality unknown (Y. C. Yang 3954, PE).

Distribution. China (Sichuan). (Fig. 58e)

Campylotropis brevifolia is similar to this species in having small leaves appearing to be palmately trifoliolate. However, it is distinguished from this species by having dense, minute, patent hairs on the upper surface of the leaflets and white woolly hairs on the inflorescences and lower surface of the leaflets. *Campylotropis yajiangensis* var. *yajiangensis*, described by Fu (1987), is the fewer-flowered plant (only one or two flowers in a raceme) of this species.

37. *Campylotropis yunnanensis* (Franch.) Schindl. in Repert. Spec. Nov. Regni. Veg. **11**: 338 (1912), in Sargent, Pl. Wils. **2**: 114 (1914), & in Hand.-Mazz., Symb. Sin. **7**: 573 (1933); E. Peter, Act. Hort. Gothob. **13**: 438 (1940); Fl. Illust. Pl. Prim. Sin. 539, fig. 534 (1955); C. Y. Wu & al., Index Fl. Yunnan. **1**: 577 (1984); P. Y. Fu in Bull. Bot. Res., Harbin **7**(4): 51 (1987), & in Fl. Reip. Pop. Sin. **41**: 127 (1995). [Figs. 56, 57]

Lespedeza yunnanensis Franch., Pl. Delavay. 166, fig. 41 (1890) [Type: China. Yunnan. Delavay 529 (P syn.), 2700 (P syn.; K isosyn.), 2849 (P syn.; A isosyn.)]; H. Lévl., Fl. Kouy-Tchéou 237 (1914–1915), & Cat. Pl. Yun-Nan 159 (1916).

Campylotropis yunnanensis var. *zhongdianensis* P. Y. Fu in Bull. Bot. Res., Harbin **7** (4): 52 (1987) [Type: China. Yunnan. Zhongdian Xian, Habaensuchun, 2750 m (Zhongdian Exped. 2095 (YUKU holo., n. v.; PE iso.)), & in Fl. Reip. Pop. Sin. **41**: 129 (1995), ut var. *zhongdianensis* P. Y. Fu., **syn. nov.**

A shrub, usually 100–200 cm high; young stems sparsely covered with appressed short

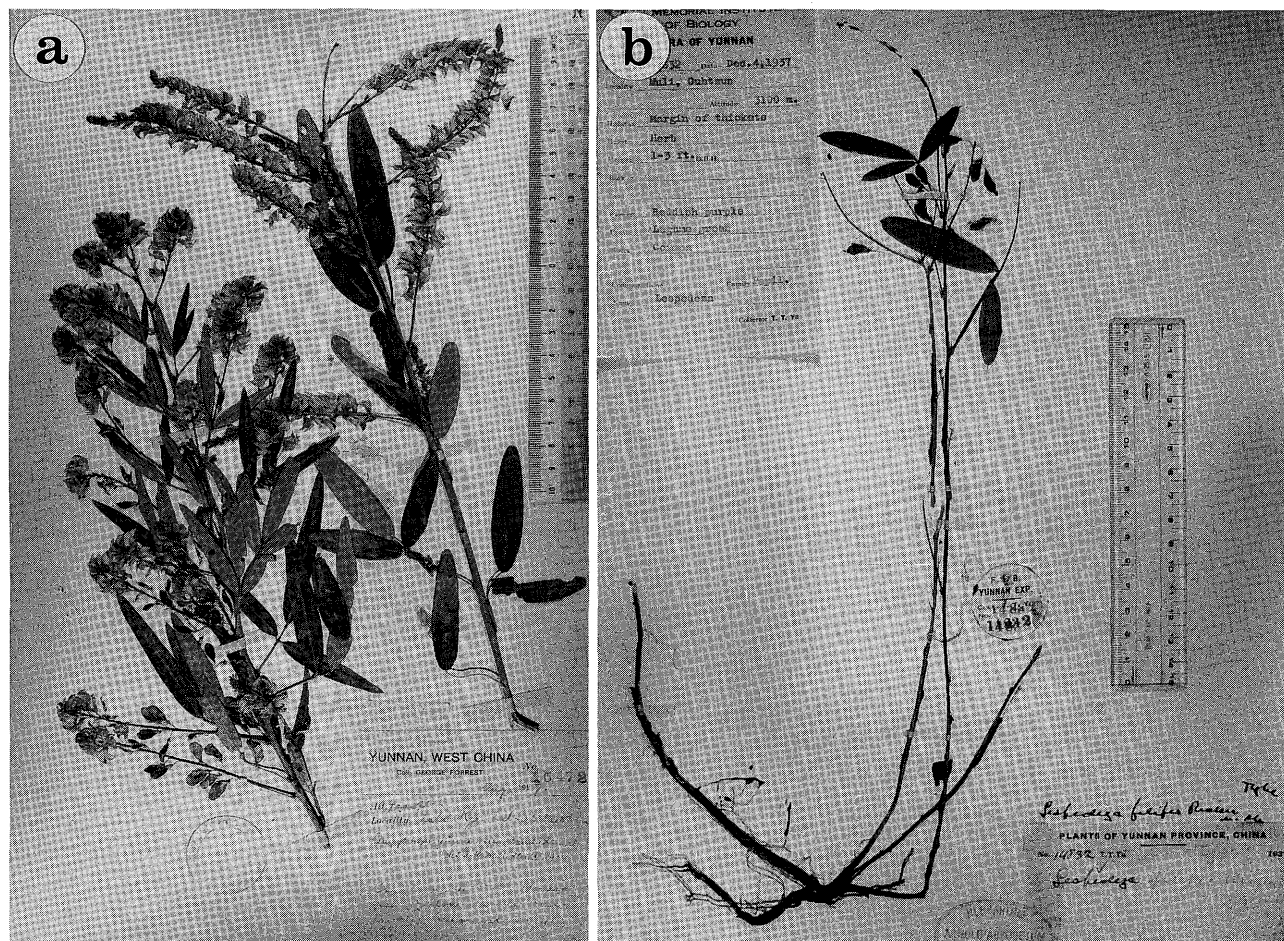


Fig. 56. a: *Campylotropis yunnanensis* (Franch.) Schindl. subsp. *yunnanensis* (voucher specimen: Tsai 58-8560, KUN). b: *C. yunnanensis* (Franch.) Schindl. subsp. *filipes* (Ricker) Iokawa & H. Ohashi (Yü 14832, A).

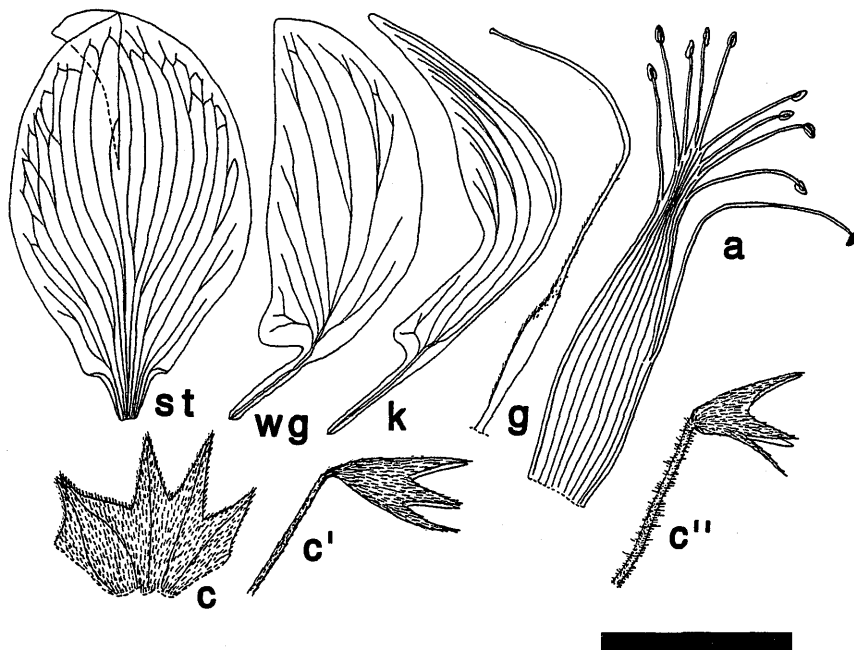


Fig. 57. Flowers of *Campylotropis yunnanensis* subsp. *yunnanensis* (c''', voucher specimen: Forrest 16884, E) and subsp. *filipes* (others: Wilson 3383, A). a: androecium, c: calyx opened (outer surface), upper lobe in left, c', c'': calyx with pedicel, g: gynoecium, k: keel-petal, st: standard, wg: wing. Scale bar = 5 mm.

hairs. Leaves with a distinct rachis; rachis 2–14 mm long. Stipules 1.5–8 mm long, 0.5–1.5 mm wide. Petioles 1.6–5.1 cm long, glabrous or sparsely appressed short hairy. Leaflets coriaceous, narrowly ovate to ovate or narrowly oblong to oblong, retuse and mucronulate at the apex, obtuse or rounded at the base, upper surface glabrous, lower surface glabrous or sparsely appressed short hairy; terminal leaflets 1.8–7.5 cm long, 0.3–2.2 cm wide. Stipels present at the top of petioles, linear, 1–3 mm long, sometimes also present at the top of the rachis. Inflorescences 1.5–15 cm long, sometimes terminally paniculate; rachis hairy. Bracts 1.7–4 mm long, caducous before anthesis. Pedicels 2.5–14 mm long, hairy. Bracteoles 1–3 mm long. Calyx subdensely appressed or ascending short hairy; tube 1.5–2.7 mm long; lobes narrowly triangular, 1.2–2 mm

long. Corolla purple; standard elliptic, obtuse at the apex, 9.5–10.5 mm long (including ca. 0.7 mm long claw), 5–6.5 mm wide; wings 8.5–10.5 mm long (including 1.6–2.6 mm long claw), 3.5–4 mm wide; keel-petals 12.5–15.5 mm long (including 1.5–3 mm long claw). Androecia 10.5–12.5 mm long, vexillary stamen connate to staminal tube for about one-fourth of its length. Gynoecia 11–13 mm long; ovary 2.5–3 mm long; style 7.5–9 mm long. Pods obliquely oblong, obtuse at the apex, lateral surface glabrous, 8–12 mm long, 4–5 mm wide. Seeds obliquely oblong, reddish brown, 3.5–4.5 × 2–2.7 mm in size.

Distribution. China (Sichuan and Yunnan). (Fig. 58f)

This species resembles *Campylotropis macrocarpa* and *C. polyantha*, but it is easy to distinguish from them by having

glabrescent stems and leaves and no glandular hairs in the inflorescences.

Campylotropis yunnanensis contains two subspecies: subsp. *yunnanensis* is confined to Yunnan, hence its distribution area is separated from that of subsp. *filipes* which is confined to Sichuan, although Muli is near the border of Yunnan.

Key to the subspecies of *C. yunnanensis*

1. Inflorescence rachis and pedicels ascending or patent short hairy; pedicels 2.5–5(–7) mm long.....subsp. *yunnanensis*
1. Inflorescence rachis and pedicels sparsely appressed short hairy; pedicels 5–14 mm long.....subsp. *filipes*

37–1. *Campylotropis yunnanensis* (Franch.) Schindl. subsp. **yunnanensis** [Figs. 56a, 57]

Specimens examined: CHINA. **Yunnan.** Eryuan Xian, Huangjiaping (R. C. Ching 24745, PE); Kiao-che-tong, Hee-chan-men (Delavay 2700, P–syntype of *Lespedeza yunnanensis* Franch.; K–isosyntype); Pien-kia-se, Tapin-tze (Delavay 2849, P–syntype of *Lespedeza yunnanensis* Franch.; A–isosyntype); Tsai-ber of Haba Snow Range (K. M. Feng 2413, A); Muli, Ngerya to Zukou, 2500 m (K. M. Feng 2914, A); locality unknown (G. Forrest 1688, A); NW. of Mt. Yangtze, 10000 ft. (G. Forrest 11057, E); NE. of Hsi yangtze, 10000 ft. (G. Forrest 11224, E); Lijiang Range, 10000–11000 ft. (G. Forrest 17070, E); Dali, 9000 ft. (G. Forrest 15472, E); Yung-ning, 10000 ft. (G. Forrest 16884, E); locality unknown (G. Forrest 17119, E); Dagu shan, in open scrub, alt. 9000 ft. (G. Forrest 17141, E); Yangtze, amongst scrubs by streams in the Lutien valley, Yangtze-Mekong divide, alt. 8000–9000 ft. (G. Forrest 20699, A, E, K); Dali, 1950–2050 m (Handel-Mazzetti 6331, A, K); Lijiang, Yangtze R., Schigu, 1920–1950 m (Handel-Mazzetti 8512, A, E, K); Mengzi, 4600 ft. (A. Henry 9134, A, E, K, MO; A. Henry 9134A, K), loc. cit., 4700 ft. (A. Henry 9702, E, MO; A. Henry 9702A, E, K, MO); Dali, Mt. Manung (McLaren's collectors C280, E, K); Pingpo to Youngchang (J. F. Rock 6995, E); Yangtze, Yangtze drainage basin, north of Shiku and east of Weihsi (J. F. Rock 11544, GH, K), Yangtze (J. F. Rock 11546, E); Tengchong (C. Schneider 2620, A); Pe yen tsin (P. S. Ten 6, A; P. S. Ten 10, E); Yunpe (P. S. Ten 32, E); Muli, Lilang, 2600 m (T. T. Yü 14885, A, E); Lanping Xian, 2500 m (H. T. Tsai 56183, A), loc.cit.,

2800 m (H. T. Tsai 56236, A, PE); loc. cit., 2300 m (H. T. Tsai 56255, A; H. T. Tsai 56257, A, PE); Zhongdian Xian, Habaensuchun, 2750 m (Zhongdian Exped. 2095, PE–isotype of *C. yunnanensis* var. *zhongdianensis* P.Y.Fu).

Distribution. China (Yunnan). (Fig. 58f)

37–2. *Campylotropis yunnanensis* (Franch.) Schindl. subsp. **filipes** (Ricker) Iokawa & H. Ohashi, **stat. nov.** [Figs. 56b, 57]

Campylotropis filipes Ricker in J. Wash. Acad. Sci. **36**: 37 (1946) [Type: China. Sichuan. T. T. Yü 14832 (A holo.; BM iso.)].

Campylotropis yunnanensis (Franch.) Schindl. var. *filipes* (Ricker) P.Y.Fu in Bull. Bot. Res., Harbin **7**(4): 52 (1987), & in Fl. Reip. Pop. Sin. **41**: 129 (1995).

Specimens examined: CHINA. **Sichuan.**; Muli, 9000 ft. (F. Kingdon-Ward 4336, 4784, E); Gyaishi Xian, 1900 m (Nanshuibei Exped. 4739, PE); locality unknown, 3000 ft. (E. H. Wilson 3383, A), Muli, 2750 m (T. T. Yü 14128, PE), loc. cit., 3100 m (T. T. Yü 14832, A–holotype of *C. filipes* Ricker; BM–isotype).

Distribution. China (Sichuan). (Fig. 58f)

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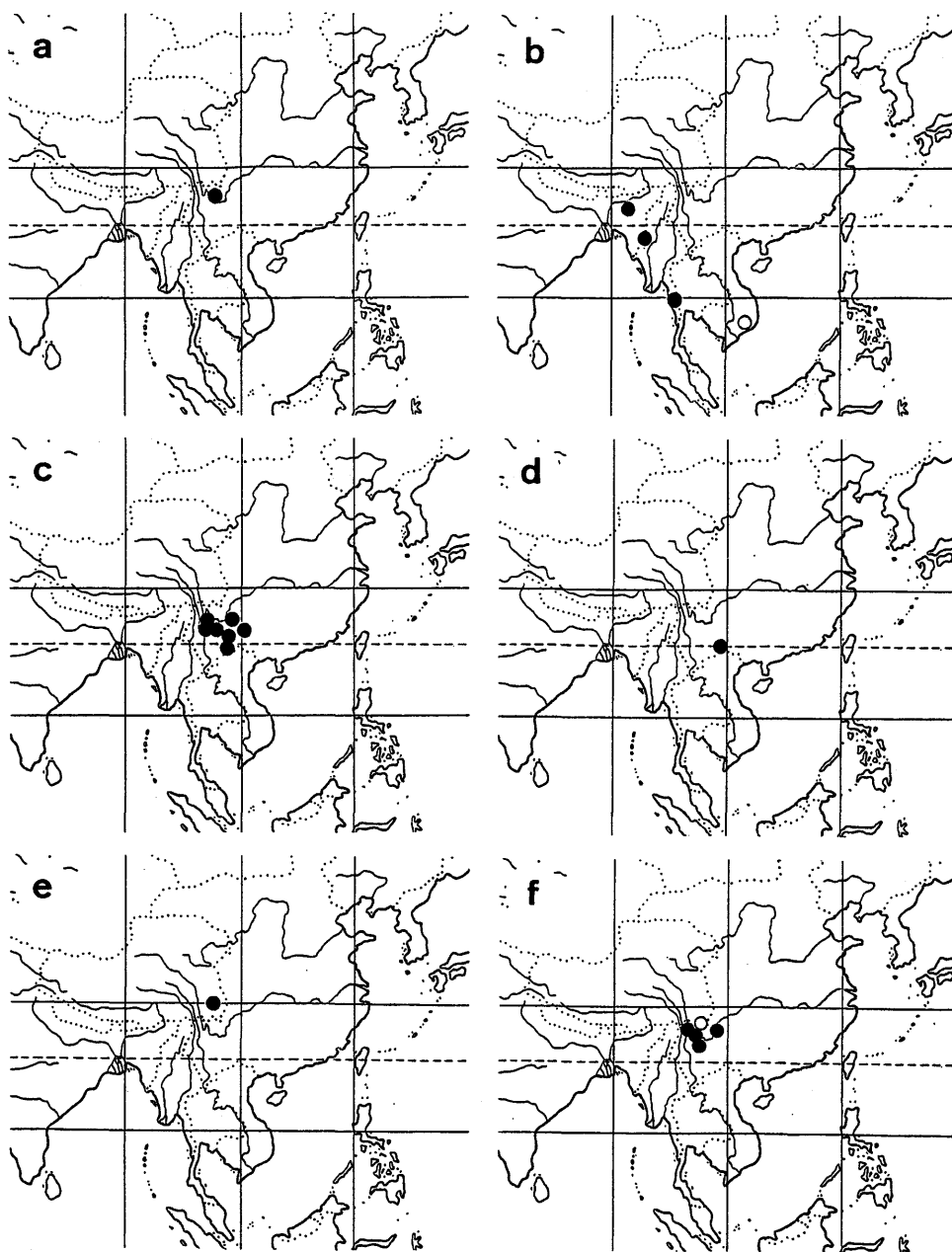


Fig. 58. Distribution of *Campylotropis* (VI). a: *C. teretiracemosa*, b: *C. thomsonii* (●: subsp. *thomsonii*, ○: subsp. *splendens*), c: *C. trigonoclada*, d: *C. wenshanica*, e: *C. wilsonii*, f: *C. yunnanensis* (●: subsp. *yunnanensis*, ○: subsp. *filipes*).

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Index for Scientific Names

New names are shown in boldface type and synonyms in italic.

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五百川 裕^a, 大橋広好^b: マメ科ハナハギ属の分類学的研究 III

前報(本誌77: 251-283, 2002)に引き続き, 分類群ごとの解説のうち残りの12種について取り扱った. ここでは, 4つの新組合せと2つの新ランクを提案した.

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